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ANESTHESIA & ANALGESIA IN RABBITS: A RESOURCE GUIDE

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Anesthesia and Analgesia in Rabbits: A Resource Guide

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Description: *Anesthesia and Analgesia in Rabbits: A Resource Guide* is a bibliography of biomedical and veterinary literature on the use of anesthesia and analgesia in rabbits covering **2011 to 2021**. It contains 279 citations. This bibliography updates *A reference source for analgesia & analgesics in animals* compiled by Dr. Richard L. Crawford (AWIC Series 2000-02) published in December 2000 and archived in the National Agricultural Library Digital Collections.

Dr. Crawford subdivided the previous bibliography into twenty sections organized by individual species or species groups. The bibliography covered most vertebrate and some invertebrate animals, including commonly used laboratory species such as mice, rats, rabbits and other rodents, and primates. One section of the bibliography covered rabbits and rodents. In the twenty years since Dr. Crawford published this bibliography, the number of publications on veterinary anesthesia and analgesia has increased greatly. Because of the large amount of literature, AWIC staff members decided to compile a series of bibliographies, each one covering a particular group of animals.

- **Scope:** This guide covers peer-reviewed literature (articles in peer-reviewed journals, books, book chapters, and conference proceedings) on anesthesia and analgesia use in rabbits published between 2011 and 2021. The following databases were searched:
    - PubMed
    - Web of Science (All Databases: Web of Science Core Collection as well as Biological Abstracts, BIOSIS Citation Index, Current Contents Connect, KCI-Korean Journal Database, Russian Science Citation Index, SciELO Citation Index, and Zoological Record)
    - Scopus
    - EBSCO platform databases (Agricola, CAB Abstracts, eBook Collection (EBSCOhost), Global Health, Zoological Record, Biological Abstracts, MEDLINE)

How to Use This Resource Guide:

The bibliography is divided into the following sections. You can navigate directly to each section by clicking on the headings in the Table of Contents:

- **Preoperative Considerations:** Literature discussing preparations, premedication, and other considerations prior to anesthesia and/or operation.
- **Methods of Delivery/Administration:** Covers aspects of anesthesia and analgesia delivery and administration, such as injection sites, intranasal administration, and tracheal access.
- **Parenteral Techniques:** Literature about different types of injection anesthesia medications and techniques.

- **Inhalation Anesthesia:** Citations in this section cover types of inhalation anesthesia medications and techniques.
- **Regional Anesthesia:** Literature concerning local and regional anesthesia including epidurals, nerve blocks, and spinal anesthesia.
- **Special Anesthetic Considerations:** Citations regarding considerations such as hypnosis, anesthesia for ophthalmic and fetal surgery, and long-term anesthetic preparations.
- **Intraoperative Support and Monitoring:** Literature about monitoring and support that occur intraoperatively, including reflexes, body temperature, and cardiopulmonary parameters.
- **Postoperative Considerations:** This section covers postoperative monitoring and other considerations.
- **Analgesia and Pain Management:** Citations in this section cover pain assessment, pain management, and analgesic medications and methods.
- **Eastern Medicine:** Literature about acupuncture and electropuncture.

Citation Order: Citations are arranged in ascending order by the last name of the first author within each section of the bibliography.

Keywords: Each citation is followed by a series of selected keywords derived from the citation records of the database searched. Because this bibliography derives from multiple databases, keywords may vary in form since databases may use different controlled vocabularies and different indexing terms.

Finding Full-Text of Articles:

You may check the National Agricultural Library's (NAL) online catalog, AGRICOLA, to see which books and periodicals that the library has in its holdings. Some online periodicals in NAL's holdings are only available to USDA employees through the Digitop portal. Other articles are open access and may be downloaded for free. If you are not a USDA employee, check with your local or institutional library to see whether your library subscribes to these periodicals or can order them on interlibrary loan.

Information on how to request materials that are included in the National Agricultural Library (NAL)'s collections can be found on the Request Library Materials page. USDA employees can request books and articles through Document Delivery. All patrons are encouraged to explore local library resources first before contacting the National Agricultural Library. If you are not a USDA employee, you may visit the library during its hours of operation to request items from our circulation desk or read electronic articles on-site. You may also request items on interlibrary loan through your home library (check with your institutional, university, or public library's loan office for further information).

Disclaimer: ***This research guide is for informational purposes only. If you are a researcher planning to use any of the anesthesia/analgesia drugs or methods mentioned in these citations on rabbits, you should always consult a veterinarian.***

Table of Contents

Preoperative Considerations

49 citations

Adetunji, A., & Lawal, F. M. (2013). Effect of enrofloxacin on acepromazine-ketamine anaesthesia in rabbits. *Folia Veterinaria*, *57*(3/4), 190–195. CAB Abstracts.

Keywords: LL882; rabbits; Veterinary Pharmacology and Anaesthesiology

Bailey, R. S., Barter, L. S., & Pypendop, B. H. (2017). Pharmacokinetics of dexmedetomidine in isoflurane-anesthetized New Zealand White rabbits. *VETERINARY ANAESTHESIA AND ANALGESIA*, *44*(4), 876–882. https://doi.org/10.1016/j.vaa.2017.01.003

Keywords: analgesia; Anesthesia, Inhalation; anesthetic agent; Anesthetics, Combined/pharmacology; Anesthetics, Inhalation; compartment model; Dexmedetomidine/administration & dosage/pharmacokinetics; drug blood level; drug concentration; drug distribution; Hypnotics and Sedatives/administration & dosage/pharmacology; Infusions, Intravenous; intravenous drug administration; IsoFlo; Isoflurane; Leporidae; limit of quantitation; mass spectrometry; mathematical model; minimum lung alveolus concentration; New Zealand White (rabbit); nonlinear regression analysis; Rabbits; Ringer lactate solution

Bellini, L., Banzato, T., Contiero, B., & Zotti, A. (2014). Evaluation of sedation and clinical effects of midazolam with ketamine or dexmedetomidine in pet rabbits. *VETERINARY RECORD*, *175*(15). https://doi.org/10.1136/vr.102595

Keywords: Abdomen; Conscious Sedation; controlled study; Dexmedetomidine; Drug Therapy, Combination; echography; Hypnotics and Sedatives; ketamine; midazolam; rabbits; randomized controlled trial; Time Factors; Treatment Outcome; Ultrasonography; veterinary

Belmonte, E. A., Nunes, N., Lopes, P. C. F., Gering, A. P., Moro, J. V., & Faria, E. G. (2015). Cardiovascular variables in rabbits anesthetized with isoflurane and subarachnoid anesthesia with levobupivacaine or lidocaine. *Revista Portuguesa de Ciencias Veterinarias*, *110*(595–596), 133–139.

Keywords: Anesthesia; Isoflurane; Inhalation Anesthesia; Levobupivacaine; lidocaine

Chae, J. J., Prausnitz, M. R., & Ethier, C. R. (2021). Effects of General Anesthesia on Intraocular Pressure in Rabbits. *JOURNAL OF THE AMERICAN ASSOCIATION FOR LABORATORY ANIMAL SCIENCE*, *60*(1), 91–95. https://doi.org/10.30802/AALAS-JAALAS-20-000016

Keywords: adverse event; anesthesia induction; Animal Surgery and Non-drug Therapy; controlled study; drug effect; drug withdrawal; experimental rabbit; eye surgery; general anesthesia; glaucoma; inhalation anesthesia; intraocular hypertension; Intraocular Pressure; IOP; Isoflurane/adverse effects; Isoflurane; isothesia; ketamine; ketathesia; LL860; LL882; L884; New Zealand White (rabbit); Non-Communicable Diseases and Injuries of Animals; oculoplethysmography; oxygen; premedication; pressure measurement; Rabbits; risk; Tonometry, Ocular/veterinary; veterinary medicine; Veterinary Pharmacology and Anaesthesiology; Xylazine

Cicero, L., Fazzotta, S., Palumbo, V. D., Cassata, G., & Lo Monte, A. I. (2018). Anesthesia protocols in laboratory animals used for scientific purposes. *Acta Bio-Medica : Atenei Parmensis*, *89*(3), 337–342. https://doi.org/10.23750/abm.v89i3.5824

Keywords: Anesthesia, General/methods/standards; Anesthetics/administration & dosage; Euthanasia, Animal/methods; Intraoperative Complications/prevention & control; Intubation, Intratracheal/methods; Monitoring, Intraoperative/methods; Preanesthetic Medication; Sample Size; Species Specificity

Cinelli, E., Bongianni, F., Pantaleo, T., & Mutolo, D. (2020). Activation of mu-opioid receptors differentially affects the preBotzinger Complex and neighbouring regions of the respiratory network in the adult rabbit. *RESPIRATORY PHYSIOLOGY & NEUROBIOLOGY*, *280*. https://doi.org/10.1016/j.resp.2020.103482

Keywords: action potential amplitude; Analgesics, Apnea/chemically induced; Apnea/physiopathology; apnea; botzinger complex; breathing pattern; breathing rate; Control of breathing; controlled study; Enkephalin, Ala(2)-MePhe(4)-Gly(5)-/pharmacology; enkephalin[2 dextro alanine 4 methylphenylalanine 5 glycine]; Medulla Oblongata/drug effects; Medulla Oblongata/metabolism; Medullary respiratory network; Microinjections; mu opiate receptor; Naloxone/pharmacology; naloxone; Narcotic Antagonists/pharmacology; nerve cell network; Neurons; Opioid/pharmacology; Opioid-induced respiratory depression; Phrenic Nerve/drug effects; Phrenic Nerve/physiopathology; preBötzinger Complex; Rabbits; Receptors, Opioid, mu/agonists; Receptors, Opioid, mu/metabolism; respiration control; respiration depression; Respiratory Center/drug effects; Respiratory Center/metabolism; Respiratory Insufficiency/chemically induced; Respiratory Insufficiency/physiopathology; respiratory tract disease; ventral respiratory group; μ-Opioid receptor

Cinelli, E., Bongianni, F., Pantaleo, T., & Mutolo, D. (2021). Differential Respiratory Effects of mu-opioid Receptor Activation within the preBotzinger Complex and Neighbouring Respiration-related Regions in the Rabbit. *FASEB JOURNAL*, *35*. https://doi.org/10.1096/fasebj.2021.35.S1.02283

Keywords: preBotzinger; mu-opioid; Rabbits; Opioid

Felzemburgh, V. A., Cettolin, Q. da C., Machado, K. M., & Oliveira Campos, J. H. (2012). Comparison between the anesthetic induction times in the first and second surgery in rabbits. *ACTA CIRURGICA BRASILEIRA*, *27*(7), 482–486. https://doi.org/10.1590/S0102-86502012000700009

Keywords: Anesthetics; Ketamine; Xylazine; Anesthesia; anesthesia induction; Anesthesia/methods/standards; Anesthetics; animal experiment; Body Weight; Body Weight/drug effects; Injections; Injections, Intramuscular; ketamine; Postoperative Period; premedication; rabbits; Reoperation; Reproducibility of Results; Saphenous Vein; Saphenous Vein/surgery; Time Factors; vein surgery; Xylazine

Giuliani, E., Manenti, A., Barbieri, A., Farinetti, A., & Mattioli, A. V. (2018). Propofol: A safe anaesthetic drug in experimental cardiac surgery in rabbits. *ANNALI ITALIANI DI CHIRURGIA*, *89*(1), 92–94.

Keywords: Anesthesia, Intravenous; Cardiac Surgical Procedures; Adrenergic alpha-2 Receptor Agonists/pharmacology/therapeutic use; alpha 2 adrenergic receptor stimulating agent; Anesthetics, Intravenous/adverse effects/pharmacology; Arrhythmias, Cardiac/chemically induced/prevention & control; Bradycardia/chemically induced/prevention & control; Cardiac ischemia; Cardiac Surgical Procedures; Cardiovascular toxicity; chemically induced; drug effect; Drug Interactions; heart arrhythmia; heart surgery; Hemodynamics; Hemodynamics/drug effects; Hypnotics and Sedatives/adverse effects/pharmacology; Intraoperative Complications/chemically induced/prevention & control; intravenous anesthesia; Leporidae; Mesenchymal Stem Cell Transplantation; Mesenchymal Stem Cell Transplantation/methods; midazolam; Midazolam/adverse effects/pharmacology; myocardial ischemia reperfusion injury; Myocardial Reperfusion Injury/therapy; peroperative complication; procedures; Propofol; Propofol/adverse effects/pharmacology; Rabbits/surgery; species difference; Species Specificity; surgery

Gonzalez Gil, A., Silvan, G., Martinez-Fernandez, L., & Illera, J. C. (2013). Effects of different fentanyl anaesthetic mixtures on cortico-adrenal function in rabbits. *VETERINARY RECORD*, *172*(8), 213-U52. https://doi.org/10.1136/vr.101350

Keywords: Adrenal Cortex; anesthetic agent; Anesthetics, Combined; Anesthetics, Intravenous; animal; blood; controlled clinical trial; controlled study; Corticosterone; Diazepam; drug effect; Fentanyl; Hydrocortisone; intravenous anesthetic agent; ketamine; Medetomidine; physiology; rabbits; randomized controlled trial; Time Factors

Gonzalez Gil, A., Villa, A., Silvan, G., & Illera, J. (2012). Corticoadrenal Response and Heart and Respiratory Rates after Propofol or Alfaxalone Anesthesia in Rabbits. *JOURNAL OF THE AMERICAN ASSOCIATION FOR LABORATORY ANIMAL SCIENCE*, *51*(5), 694–695.

Keywords: Anesthesia; Rabbits; Propofol; Alfaxalone; Heart Rate; Respiratory Rate

Greenfield, E. A. (2018). Administering anesthesia to rabbits. *Cold Spring Harbor Protocols*, *2018*(9), 699–701. Scopus. https://doi.org/10.1101/pdb.prot100206

Keywords: anesthesia; Anesthetics/administration & dosage; experimental injection; Postoperative Care; Preoperative Care; Rabbits

Hedenqvist, P., Edner, A., Fahlman, A., & Jensen-Waern, M. (2013). Continuous intravenous anaesthesia with sufentanil and midazolam in medetomidine premedicated New Zealand White rabbits. *BMC VETERINARY RESEARCH*, *9*. https://doi.org/10.1186/1746-6148-9-21

Keywords: Anesthetics, Intravenous/administration & dosage; Hypnotics and Sedatives; Medetomidine; Midazolam/administration & dosage; Rabbits/physiology; Sufentanil/administration & dosage; Alpha-2-agonist; Anesthesia, Intravenous; anesthetic agent; Anesthetics, Combined; Anesthetics, Intravenousanimal disease; Benzodiazepine; Blood Pressure/drug effects; breathing rate; Canis familiaris; Cardiac Output/drug effects; Hypnotics and Sedatives; Hypotension; Medetomidine; methodology; midazolam; Opioid; Oryctolagus cuniculus; physiology; rabbits; Respiratory depression; Respiratory Rate/drug effects; Sufentanil; TIVA; anesthesia; Animal Physiology and Biochemistry (Excluding Nutrition); Animal Surgery and Non-drug Therapy; cardiac output; cats; dogs; Farm and Horticultural Structures; Felidae; Fissipeda; heart rate; hypotension; intravenous injection; Leporidae; LL070; LL600; LL882; LL884; mortality; muscles; New Zealand White rabbit; NN300; oxygen; pH; rabbits; reflexes; respiratory rate; surgery; Veterinary Pharmacology and Anaesthesiology

Hedenqvist, P., Edner, A., & Jensen-Waern, M. (2014). Anaesthesia in medetomidine premedicated New Zealand White rabbits: A comparison between intravenous sufentanil-midazolam and isoflurane anaesthesia for orthopaedic surgery. *LABORATORY ANIMALS*, *48*(2), 155–163. https://doi.org/10.1177/0023677213516311

Keywords: anesthesia induction; Anesthetics, Combined; Anesthetics, Inhalation; Anesthetics, Intravenous; animal experiment; Animal model; Blood Glucose; Blood Pressure; Blood Proteins; bone defect; Cardiac Output; continuous infusion; controlled study; endotracheal intubation; femur condyle; glucose blood level; Hypnotics and Sedatives; Inhalation anaesthesia; intermittent positive pressure ventilation (IPPV); intravenous anesthesia; Isoflurane; lactate blood level; Lactic Acid; maintenance drug dose; mean arterial pressure; Medetomidine; midazolam; orthopedic surgery; rabbits; Respiratory Rate; righting reflex; Stifle; Sufentanil; total intravenous anaesthesia (TIVA); anesthesia; Animal Surgery and Non-drug Therapyblood glucose; blood serum; carbon dioxide; femur; heart rate; intravenous injection; laboratory animals; lactic acid; Leporidae; LL860; LL882; LL884; Non-Communicable Diseases and Injuries of Animals; orthopedics; protein content; protocols; rabbits; surgery; Veterinary Pharmacology and Anaesthesiology

Hedenqvist, P., Jensen-Waern, M., Fahlman, A., Hagman, R., & Edner, A. (2015). Intravenous sufentanil-midazolam versus sevoflurane anaesthesia in medetomidine pre-medicated Himalayan rabbits undergoing ovariohysterectomy. *VETERINARY ANAESTHESIA AND ANALGESIA*, *42*(4), 377–385. https://doi.org/10.1111/vaa.12207

Keywords: Anesthesia; Anesthesia/veterinary; anesthetic agent; Anesthetics, Combined; Anesthetics, Combined/administration & dosage; Anesthetics, Intravenous; Anesthetics, Intravenous/administration & dosageAnimaliacontrolled study; ether derivative; Hypnotics and Sedatives/administration & dosage; Hysterectomy; Hysterectomy/veterinary; intravenous anesthetic agent; Medetomidine; Medetomidine/administration & dosage; Methyl Ethers/administration & dosage; midazolam; Midazolam/administration & dosage; Oryctolagus cuniculus; Ovariohysterectomy; Rabbits; randomized controlled trial; Sevoflurane; Sufentanil; Sufentanil/administration & dosage; Total intravenous anaesthesia sufentanil-midazolam; Treatment Outcome

Hejazi, H., Abedi, G., Jahandide, A., Asghari, A., & Hesaraki, S. (2019). Investigation of the effects of spinal dexamethasone injection as a premedication in rabbit anesthesia. *Archives of Razi Institute*, *74*(1), 69–75. Scopus.

Keywords: albino rabbit; analgesia; Anesthesia; animal experiment; animal tissue; breathing depth; breathing rate; controlled study; cornea reflex; Dexamethasone; histopathology; Hypnotics and Sedatives; Injections, Spinal; intraspinal drug administration; ketamine; Leporidae; mucosa; muscle relaxant agent; muscle tone; Neuromuscular Agents; Premedication; procedures; pulse rate; Rabbits; reflex; salivation; Spine; veterinary medicine; vomiting; Xylazine

Hinde, J. (2017). *Holistic rabbit anaesthesia and airway management.* (S. Jayson & S. Pellett, Eds.; p. 38). British Veterinary Zoological Society; CAB Abstracts. https://search.ebscohost.com/login.aspx?direct=true&db=lah&AN=20193073311&site=ehost-live

Keywords: anesthesia; Animal Anatomy and Morphology; Animal Behaviour; Animal Nutrition (General); Animal Physiology and Biochemistry (Excluding Nutrition); Animal Surgery and Non-drug Therapy; body components; Canidae; Canis; carnivores; cats; death rate; dogs; Felidae; Felis; Fissipeda; Leporidae; LL070; LL300; LL400; LL500; LL600; LL882; LL884; preanesthetic medication; rabbits; Veterinary Pharmacology and Anaesthesiology

Hirata, A., Kasahara, M., Matsuura, N., & Ichinohe, T. (2018). Remifentanil decreases oral tissue blood flow while maintaining internal carotid artery blood flow during sevoflurane anesthesia in rabbits. *Journal of Veterinary Medical Science*, *80*(2), 354–360. Scopus. https://doi.org/10.1292/jvms.17-0319

Keywords: Anesthetics, Inhalation; Anesthetics, Intravenous; blood flow; Blood Pressure; Carotid Arteries; dimethyl ether; drug effect; Heart Rate; Internal carotid artery blood flow; intravenous anesthetic agent; Leporidae; Methyl Ethers; Mouth; Oral tissue blood flow; piperidine derivative; Piperidines; Rabbits; Regional Blood Flow; Remifentanil; Sevoflurane; Vascular Resistance; vascularization

Holve, D. L., Gum, G. G., & Pritt, S. L. (2013). Effect of Sedation with Xylazine and Ketamine on Intraocular Pressure in New Zealand White Rabbits. *JOURNAL OF THE AMERICAN ASSOCIATION FOR LABORATORY ANIMAL SCIENCE*, *52*(4), 488–490.

Keywords: animal experiment; controlled study; experimental rabbit; Hypnotics and Sedatives; Intraocular pressure; ketamine; Rabbits; sedation; tonometry; Xylazine

Ishida, T., Onuma, M., Ono, S., Murakami, A., & Sano, T. (2014). Anesthesia-associated death in 160 rabbits. *Japanese Journal of Veterinary Anesthesia & Surgery*, *45*(1), 7–12. CAB Abstracts. https://doi.org/10.2327/jvas.45.7

Keywords: anesthesia; Animal Surgery and Non-drug Therapy coronary diseases; death rate; Diagnosis of Animal Diseases; LL070; LL860; LL882; LL884; LL886; Non-Communicable Diseases and Injuries of Animals; preanesthetic medication; rabbits; Veterinary Pharmacology and Anaesthesiology

Jain, N., Himed, K., Toth, J. M., Briley, K. C., Phillips, F. M., & Khan, S. N. (2018). Opioids delay healing of spinal fusion: A rabbit posterolateral lumbar fusion model. *The Spine Journal : Official Journal of the North American Spine Society*, *18*(9), 1659–1668. MEDLINE. https://doi.org/10.1016/j.spinee.2018.04.012

Keywords: Analgesics, Opioid/adverse effects; Analgesics, Opioid/therapeutic use; Biology; Bone Transplantation/adverse effects; Bone Transplantation/methods; Bone; Fusion; Healing; Lumbar Vertebrae/surgery; MicroCT; Narcotics; Opioids; Rabbits; Spinal Fusion/methods; Spinal Fusion/adverse effects; Spine; Transplantation, Autologous/adverse effects; Transplantation, Autologous/methods; Wound Healing/drug effects

Kershaw, T. E. (2020). A summary of rabbit anaesthesia—Part I: preparation and pre-operative nursing. *Veterinary Nursing Journal*, *35*(9/12), 312–315. CAB Abstracts. https://doi.org/10.1080/17415349.2020.1806766

Keywords: anesthesia; Health Services; Leporidae; LL882; rabbits; UU350; Veterinary Pharmacology and Anaesthesiology

Khalaf Albozachri, J. M., Al-Tomah, H. M., Wali, O. N., & Jameel, Y. J. (2019). A comparison study of nefopam ketamine, tramadol ketamine and xylazine ketamine anesthesia in rabbit. *Research Journal of Pharmacy and Technology*, *12*(5), 2439–2442. Scopus. https://doi.org/10.5958/0974-360X.2019.00409.8

Keywords: Anaesthesia; analgesic activity; breathing rate; clinical ; comparative study; controlled study; general anesthesia; heart rate; ketamine; Nefopam; operation duration; premedication; rectal temperature; Tramadol; xylazine

Khan, M. A., Tunio, A. N., Ahmad, A., Kachiwa, A. B., Malhi, M. C., Khan, A., Qasim, M., Said, A., Khan, R. U., & Khan, M. (2019). Comparative study of isoflurane and ketamine anesthetics in Rabbits.

Pesquisa Agropecuaria Brasileira, *8*(2), 1385–1397. Scopus. https://doi.org/10.19045/BSPAB.2019.80079

Keywords: Anesthesia; Isoflurane; Ketamine; Physiology; Rabbits

Krall, C., & Hutchinson, E. (2018). *A shy temperament correlates with respiratory instability during anaesthesia in laboratory-housed New Zealand white rabbits* (M. Cockram, T. Tennessen, L. Bate, R. Bergeron, S. Cloutier, A. Fisher, & M. Hotzel, Eds.; BCI:BCI202100042371; p. 251).

Keywords: Anesthesia; Rabbits; Temperament; Respiration

Lafferty, K. (2015). Anesthetic Management of Rabbits and Ferrets. In *Quest. And Answers in Small Anim. Anesth.* (pp. 343–354). wiley; Scopus. https://www.scopus.com/inward/record.uri?eid=2-s2.0-84955699627&partnerID=40&md5=04cdb061226dc26afbd590f3719d3f44

Keywords: Anesthesia; Rabbits

Liu, J., Li, Y., Zhang, J., Cai, Y., Shang, Q., Ma, C., Bian, D., Chen, Z., & Xiao, E. (2019). Comparison of anesthesia and tumor implantation methods for establishing rabbit VX2 hepatocarcinoma. *AMERICAN JOURNAL OF TRANSLATIONAL RESEARCH*, *11*(11), 7157–7165.

Keywords: animal model; Hepatocarcinoma; implantation; laparotomy; ultrasound; VX2

Mair, A., & Mathis, A. (2018). Completeness of handwritten preanaesthetic records at two veterinary referral institutions. *Veterinary Anaesthesia and Analgesia*, *45*(2), 129–134. https://doi.org/10.1016/j.vaa.2017.08.007

Keywords: anaesthesia; Anesthesia/standards/veterinaryCats; completeness; Dogs; Emergencies/veterinary; Ferrets; Hospitals, Animal/standards; paper; Rabbits; Records/standards; Referral and Consultation/standards; Retrospective Studies; Veterinary Medicine/standards

Miller, J., Arndt, T., Stake, S., Perronne, K., Schumacher, S., & Kamholz, A. (2017). Effects of Sedation by Acepromazine on Routine Clinical Pathology Parameters and Intraocular Pressure in Rabbits. *INTERNATIONAL JOURNAL OF TOXICOLOGY*, *36*(1), 76–76.

Keywords: Sedation; Anesthesia; Rabbits; Intraocular Pressure; Acepromazine

Nakamura, S., Suzuki, M., Terayama, K., Yoshida, K., Sasaki, S., One, N., Suzuki, Y., Sugita, K., Kimura, M., & Maruyama, K. (2015). Pre-injected picrotoxin, not bicuculline nor flumazenil, caused flumazenil-evoked marked excitation in the diazepam-inhibited hypoglossal activity in anesthetized rabbits. *JOURNAL OF PHARMACOLOGICAL SCIENCES*, *128*(3), S241–S241.

Keywords: Anesthesia; Rabbits; Picrotoxin; bicuculline; flumazenil; diazepam

Navarrete-Calvo, R., Gomez-Villamandos, R. J., Morgaz, J., Manuel Dominguez, J., Fernandez-Sarmiento, A., Munoz-Rascon, P., Lopez Villalba, I., & Del Mar Granados, M. (2014). Cardiorespiratory, anaesthetic and recovery effects of morphine combined with medetomidine and alfaxalone in rabbits. *VETERINARY RECORD*, *174*(4). https://doi.org/10.1136/vr.101293

Keywords: alfaxalone; Anesthesia; Anesthesia Recovery Period; Anesthesia/veterinary; anesthetic agent; anesthetic recovery; Anesthetics, Combined; Anesthetics, Combined/administration & dosage; animal disease; Blood Gas Analysis/veterinary; Blood Pressure; Blood Pressure/drug effects; breathing; breathing rate; Cross-Over Studies; crossover procedure; drug effect; Injections, Intramuscular; Injections, Intramuscular/veterinary; intramuscular drug administration; Medetomidine; Medetomidine/administration & dosage; Morphine; Morphine/administration & dosage; physiology; Pregnanediones; Pregnanediones/administration

& dosage; Rabbits/physiology; Respiration; Respiration/drug effects; Respiratory Rate; Respiratory Rate/drug effects/physiology

O'Dwyer, L., Slade, L., & Pickup, S. (2013). Safe delivery of anaesthetic agents in cats and rabbits. *The Veterinary Nurse*, *4*(7), 422–428. CAB Abstracts.

Keywords: administration routes; anesthesia; anestheticscarnivores; cats; Engineering and Equipment (General); Felidae; Felis; Fissipeda; Leporidae; LL070; LL882; methods; NN000; rabbits; Techniques and Methodology; Veterinary Pharmacology and Anaesthesiology; ZZ900

Rennó, C. C., Papini, J. Z. B., Cereda, C. M. S., Martinez, E., Montalli, V. A., de Paula, E., Pedrazzoli Júnior, J., Calafatti, S. A., & Tofoli, G. R. (2019). Preclinical Evaluation of Ropivacaine in 2 Liposomal Modified Systems. *Anesthesia and Analgesia*, *129*(2), 387–396. https://doi.org/10.1213/ANE.0000000000003837

Keywords: Nerve Block; Anesthetics, Local/administration & dosage/blood/chemistry/pharmacokinetics; Cell Line; Disease Models, Animal; Drug Compounding; Liposomes; Motor Activity/drug effects; Pain Threshold/drug effects; Pain, Postoperative/physiopathology/prevention & control; Rabbits; Rats, Wistar; Ropivacaine/administration & dosage/blood/chemistry/pharmacokinetics; Sciatic Nerve/drug effects

Richardson, D. (2015). A comparison of the v-gel® supraglottic airway device and non-cuffed endotracheal tube in the time to first capnograph trace during anaesthetic induction in rabbits. *The Veterinary Nurse*, *6*(7), 426–432. CAB Abstracts. https://doi.org/10.12968/vetn.2015.6.7.426

Keywords: anesthesia; Animal Surgery and Non-drug Therapy; CC700; intubation; Leporidae; LL070; LL860; LL882; LL884; neutering; Non-Communicable Diseases and Injuries of Animals; Professions: Practice and Service; rabbits; traumas; Veterinary Pharmacology and Anaesthesiology

Rickerl, K., Reed, J., & Brundage, C. (2020). Physiological effect of trazodone hydrochloride use for anxiety and sedation in rabbits (Oryctolagus cuniculus). *FASEB JOURNAL*, *34*. https://doi.org/10.1096/fasebj.2020.34.s1.08780

Keywords: Sedation; Anesthesia; Rabbits; Anxiety; Trazodone

Romanucci, M., Defourny, S. V. P., Massimini, M., Valerii, V., Arbuatti, A., Giordano, V., Bongiovanni, L., Perrone, C., & Della Salda, L. (2017). Unexpected Cardiac Death During Anaesthesia of a Young Rabbit Associated with Fibro-fatty Replacement of the Right Ventricular Myocardium. *JOURNAL OF COMPARATIVE PATHOLOGY*, *156*(1), 33–36. https://doi.org/10.1016/j.jcpa.2016.10.008

Keywords: cardiomyopathy; heart; myocardium; rabbits; Anesthesia, Inhalation; Anesthetics, Inhalation/therapeutic useanimal cell; animal tissue; autopsy; bradycardia; cardiac muscle; cardiomyopathy; case report; cell structure; congenital dilated cardiomyopathy; congenital disorder; congestive cardiomyopathy; Death, Sudden, Cardiac; Death, Sudden, Cardiac/veterinary; disease severity; heart; heart disease; heart right ventricle hypertrophy; heart ventricle; Heart Ventricles/pathology; histopathology; inhalation anesthetic agent; Isoflurane; Isoflurane/therapeutic use; myocardial disease; Myocardium; Myocardium/pathology; ovariectomy; Ovariectomy; pathology; pet animal; Rabbits and hares; right ventricular free wall thinning; right ventricular myocardium fibro fatty replacement; sudden cardiac death; veterinary

Santos, M., Vinuela, A., Vela, A. A., & Tendillo, F. J. (2016). Single-syringe ketamine-propofol for induction of anaesthesia in rabbits. *VETERINARY ANAESTHESIA AND ANALGESIA*, *43*(5), 561–565. https://doi.org/10.1111/vaa.12345

Keywords: anaesthesia; anesthetic agent; Anesthetics, Combined; Anesthetics, Intravenous; breathing; Cardiovascular System; controlled study; drug effects; induction; intravenous anesthetic agent; ketamine; Propofol; Prospective Studies; prospective study; rabbits; randomized controlled trial; Respiration; single blind procedure; Single-Blind Method; Syringes; blood gases; blood pressure; dose response; heart rate; HH410; hypoxia; intravenous injection; Leporidae; lidocaine; LL600; LL882; New Zealand White rabbit; oxygen; Pesticide and Drug Resistance; rabbits; sedation; t-test; Veterinary Pharmacology and Anaesthesiology

Saritas, T. B., Saritas, Z. K., Korkmaz, M., & Sivaci, R. G. (2013). Comparison of Bispectral Index and Vital Parameters in Rabbits Receiving Propofol or Isoflurane Anesthesia. *ACTA SCIENTIAE VETERINARIAE*, *41*.

Keywords: Anesthesia; Isoflurane; Propofol; Rabbits

Sibbald, R. (2018). Principles of rabbit anaesthesia for veterinary nurses. *The Veterinary Nurse*, *9*(4), 202–206. Global Health. https://doi.org/10.12968/vetn.2018.9.4.202

Keywords: adverse reactions; anesthesia; anesthetics; CC700; drug action; LL070; LL882; mechanism of drug action; Professions: Practice and Service; rabbits; Veterinary Pharmacology and Anaesthesiology

Simsek, T., Altinisik, U., Ersan, I., Sahin, H., Altinisik, B., Erbas, M., & Pala, C. (2016). Prevention of intraocular pressure elevation with oleuropein rich diet in rabbits, during the general anaesthesia. *SPRINGERPLUS*, *5*. https://doi.org/10.1186/s40064-016-2402-3

Keywords: adverse drug reaction; alanine aminotransferase; Alanine Transaminase; albumin; Anesthesia; Anesthesia, General; animal experiment; animal tissue; Anti-Inflammatory Agents; Aspartate Aminotransferases; blood; body temperature; cell activation; cell aggregation; Cell Aggregation; Cell Degranulation; cell infiltration; Chromatography, High Pressure Liquid; controlled study; degranulation; Diet Therapy; drug effect; Drug-Related Side Effects and Adverse Reactions; enzymology; evaluation study; high performance liquid chromatography; histopathology; immunohistochemistry; Immunohistochemistry; Iridoids; ketamine; Leporidae; leukocyte aggregation; Liver; mast cell activation; Mast Cells; mean arterial pressure; microscopy; neuromuscular blocking agent; Neuromuscular Nondepolarizing Agents; oleuropein; olive leaf extract; oxygen saturation; pathology; plant extract; Pre-Exposure Prophylaxis; procedures; pulse oximetry; Rabbits; Random Allocation; randomization; reproducibility; Reproducibility of Results; Rocuronium; Serum Albumin; tolonium chloride; tryptase; unclassified drug

Sogebi, E., & Cliff, A. I. (2020). Anaesthetic and cardiopulmonary effects of dexamedetomidine, buprenorphine, dexmedetomidine—Buprenorphine on alfaxalone in adult rabbits—A comparative study. *Egyptian Journal of Veterinary Sciences*, *51*(3), 373–379. CAB Abstracts. https://doi.org/10.21608/ejvs.2020.28770.1170

Keywords: alfaxalone; anesthesia; Animal Physiology and Biochemistry (Excluding Nutrition); blood glucose; buprenorphine; Canidae; cats; circulatory system; dexmedetomidine; dogs; Felidae; ferrets; Fissipeda; glucose in blood; Leporidae; LL070; LL600; LL882; Mustelidae; pain killers; rabbits; sedation; Veterinary Pharmacology and Anaesthesiology

Tearney, C. C., Barter, L. S., & Pypendop, B. H. (2015). Cardiovascular effects of equipotent doses of isoflurane alone and isoflurane plus fentanyl in New Zealand White rabbits (Oryctolagus cuniculus). *American Journal of Veterinary Research*, *76*(7), 591–598. https://doi.org/10.2460/ajvr.76.7.591

Keywords: Anesthetics, Inhalation/administration & dosage/pharmacology; Balanced Anesthesia; Blood Pressure/drug effects; Cardiac Output/drug effects; Fentanyl/administration &

dosage/blood/pharmacology; Heart Rate/drug effects; Isoflurane/administration & dosage/pharmacology; Rabbits; Vascular Resistance/drug effects

Tutunaru, A. C., Leau, F., Sonea, A., & Sandersen, C. (2013). The use of medetomidine and buprenorphine for premedication, ketamine for induction and isoflurane to maintain general anesthesia in rabbits. Case studies. *Scientific Works. Series C. Veterinary Medicine*, *59*(1), 81–84. Global Health.

Keywords: Animal and in-vitro Models for Pharmaceuticals; Animal Models of Human Diseases; Animal Surgery and Non-drug Therapy; Laboratory Animal Science; Leporidae; LL040; LL860; LL882; LL884; Non-Communicable Diseases and Injuries of Animals; rabbits; Veterinary Pharmacology and Anaesthesiology; VV400; VV450

Udegbunam, R. I., Offor, G. E., & Udegbunam, S. O. (2012). Anesthetic, physiologic and hematologic effects of three pentobarbitone drug combinations in rabbits. *Journal of Pharmacology and Toxicology*, *7*(4), 213–218. Scopus. https://doi.org/10.3923/jpt.2012.213.218

Keywords: acepromazine; anesthesia complication; anesthesia induction; anesthesia level; anesthesia mechanism; animal experiment; atropine; blood toxicity; bradycardia; calmivet; cardiotoxicity; combination chemotherapy; controlled study; disease severity; erythrocyte count; Erythrocytes; hematocrit; Intraperitoneal; leukocyte count; lung toxicity; pentobarb; pentobarbital; Pentobarbitone; rabbits; Respiratory depression; unclassified drug; xylazine

Udegbunam, R. I., Ogbanya, K. C., Ewunonu, U. I., Udegbunam, S. O., Onuba, A. C., & Ugwu, N. E. (2017). Evaluation of anaesthetic characteristics of propofol in non-premedicated rabbits with experimentally induced post renal unilateral ureteral obstruction. *Animal Research International*, *14*(1), 2568–2575. CAB Abstracts.

Keywords: LL860; LL882; Non-Communicable Diseases and Injuries of Animals; rabbits; Veterinary Pharmacology and Anaesthesiology

Yamada, T., Nagata, H., Kosugi, S., Suzuki, T., Morisaki, H., & Kotake, Y. (2018). Interaction between anesthetic conditioning and ischemic preconditioning on metabolic function after hepatic ischemia-reperfusion in rabbits. *JOURNAL OF ANESTHESIA*, *32*(4), 599–607. https://doi.org/10.1007/s00540-018-2523-7

Keywords: alanine aminotransferase; alanine aminotransferase blood level; Anesthesia; Anesthetics, Inhalation; animal experiment; animal model; aortic flow; aspartate aminotransferase; aspartate aminotransferase blood level; buprenorphine; comparative study; controlled study; Disease Models, Animal; drug effect; experimental liver ischemia-reperfusion injury; galactose; heart rate; Hemodynamics; inhalation anesthesia; inhalation anesthetic agent; intravenous anesthesia; Ischemia–reperfusion; ischemic preconditioning; Ischemic Preconditioning; Japanese White (rabbit); lactate blood level; lactic acid; left liver lobe; Leporidae; Liver; liver blood flow; Liver Diseases; liver metabolism; liver perfusion; mean arterial pressure; metabolic disorder; microvascularization; pathophysiology; Preconditioning; procedures; Propofol; rabbit model; Rabbits; Reperfusion Injury; right liver lobe; Sevoflurane

Zeeland, Y. van, & Schoemaker, N. (2014). Current anaesthetic considerations and techniques in rabbits. Part I: Pre-anaesthetic considerations and commonly used analgesics and anaesthetics. *European Journal of Companion Animal Practice*, *24*(4), 19–30. CAB Abstracts.

Keywords: administration routes; anesthesia; anesthetics; Animal Health and Hygiene (General); animal health products; CC700; death rate; hypovolemia; Leporidae; LL070; LL800; LL882; preanesthetic medication; Professions: Practice and Service; rabbits; rehydration therapy; Techniques and Methodology; Veterinary Pharmacology and Anaesthesiology; ZZ900

Zhou, W., Ko, Y., Benharash, P., Yamakawa, K., Patel, S., Ajijola, O. A., & Mahajan, A. (2012). Cardioprotection of electroacupuncture against myocardial ischemia-reperfusion injury by modulation of cardiac norepinephrine release. *American Journal of Physiology. Heart and Circulatory Physiology*, *302*(9), H1818-1825. https://doi.org/10.1152/ajpheart.00030.2012

Keywords: Electroacupuncture; Arrhythmias, Cardiac/prevention & control; Benzophenanthridines/pharmacology; Models, Animal; Myocardial Infarction/pathology; Myocardial Reperfusion Injury/metabolism/pathology/prevention & control; Myocardium/metabolism; Naloxone/pharmacology; Narcotic Antagonists; Norepinephrine/metabolism; Oxygen/metabolism; Protein Kinase C/antagonists & inhibitors; Rabbits; Signal Transduction/drug effects/physiology; Sympathetic Nervous System/physiology; Ventricular Function, Left/physiology

Methods of Delivery/Administration

8 citations

Chitty, J. (2013). Top tips for rabbits: Anaesthesia and imaging. *Companion*, *No.December*, 12–13. CAB Abstracts.

Keywords: anesthesia; Animal Health and Hygiene (General); Animal Surgery and Non-drug Therapybody components; Diagnosis of Animal Diseases; intubation; Leporidae; LL070; LL800; LL860; LL882; LL884; LL886; Non-Communicable Diseases and Injuries of Animals; rabbits; supraglottic airway device; Techniques and Methodology; traumas; Veterinary Pharmacology and Anaesthesiology; ZZ900

Da Fonseca, A. F. B., Scheffer, J. P., Coelho, B. P., Aiello, G., Guimaraes, A. G., Gama, C. R. B., Vescovini, V., Cabral, P. G. A., & Oliveira, A. L. A. (2016). Technique of spinal cord compression induced by inflation of epidural balloon catheter in rabbits (Oryctologus cuniculus): Efficient and easy to use model. *ANAIS DA ACADEMIA BRASILEIRA DE CIENCIAS*, *88*(3), 1511–1517. https://doi.org/10.1590/0001-3765201620160060

Keywords: Animals; Catheters; Disease Models, Animal; Epidural Space; Rabbits; Reproducibility of Results; Spinal Cord Compression/etiology

de Miguel Garcia, C., Radkey, D. I., Hetzel, S., & Doss, G. (2020). Injection techniques for auricular nerve blocks in the rabbit cadaver. *Veterinary Anaesthesia and Analgesia*. Scopus. https://doi.org/10.1016/j.vaa.2019.11.006

Keywords: anatomic landmark; animal experiment; auricle; auricular nerves; auriculotemporal; Cadaver; controlled study; dissection; Ear Auricle/innervation; greater auricular; incidence; injection; Injections/methods/veterinary; innervation; Leporidae; mandibular nerve; Nerve Block/methods/veterinary; prospective study; rabbits; regional anesthesia; veterinary medicine

Fonseca, C., Server, A., Esteves, M., Barastegui, D., Rosal, M., Fontecha, C. G., & Soldado, F. (2015). An ultrasound-guided technique for axillary brachial plexus nerve block in rabbits. *LAB ANIMAL*, *44*(5), 179–184. https://doi.org/10.1038/laban.732

Keywords: Amides; Anesthetics, Local; Amides; analgesia; Anesthetics, Local; brachial plexus anesthesia; Brachial Plexus Block; Brachial Plexus Block/methods/veterinary; Brachial Plexus/diagnostic imaging; diagnostic imaging; echography; local anesthetic agent; Pain Management; procedures; rabbits; Ropivacaine; Ultrasonography; veterinary; administration routes; Animal Surgery and Non-drug Therapy; LL822; LL884; nerves; Protozoan, Helminth, Mollusc and Arthropod Parasites of Animals;

Hallab, N. J., Bao, Q.-B., & Brown, T. (2013). Assessment of epidural versus intradiscal biocompatibility of PEEK implant debris: An in vivo rabbit model. *EUROPEAN SPINE JOURNAL*, *22*(12), 2740–2751. https://doi.org/10.1007/s00586-013-2904-4

Keywords: animal cell; animal experiment; animal tissue; Biocompatibility; controlled study; Cytokines; Disc arthroplasty; dura mater; Epidural Space; experimental rabbit; Fibrosis; Foreign Bodies; histopathology; Immune response; immunocompetent cell; immunohistochemistry; in vivo study; Inflammation; inflammatory cell; Interleukin-1beta; Interleukin-6; intermethod comparison; Intervertebral Disc; joint prosthesis; Ketones; Materials Testing; Models, Animal; PEEK; polyetheretherketone; Polyethylene Glycols; Prostheses and Implants; quantitative analysis; Rabbits; simulator; Spine; Tumor Necrosis Factor-alpha; Wear particles

Kluge, K., Larenza Menzies, M. P., Kloeppel, H., Pearce, S. G., Bettschart-Wolfensberger, R., & Kutter, A. P. N. (2017). Femoral and sciatic nerve blockades and incision site infiltration in rabbits undergoing stifle joint arthrotomy. *LABORATORY ANIMALS*, *51*(1), 54–64. https://doi.org/10.1177/0023677215622734

Keywords: analgesia; Anesthetics, Local; Bupivacaine; Lidocaine; rabbits; anesthesia level; animal experiment; animal model; arthrotomy; buprenorphine; carprofen; controlled study; drug effects; experimental rabbit; Femoral Nerve; fentanyl; heart rate; Intraoperative Complications/prevention & control; intraoperative period; isoflurane; local anesthesia; morphine; Nerve Block; Nociception; Nociception/drug effects; pain; pain assessment; Pain control; perineural drug administration; Peripheral nerve blockade; placebo; postoperative analgesia; postoperative pain; propofol; Rabbits and hares; randomized controlled trial; range of motion; Refinement; Sciatic Nerve; Stifle; stifle joint arthrotomy; Stifle/surgery; surgery; Surgical Wound; systolic blood pressure; visual analog scale; Animal Surgery and Non-drug Therapy; Laboratory Animal Science; Leporidae; LL040; LL882; LL884; rabbits; Veterinary Pharmacology and Anaesthesiology

Luca, G. C., Barter, L. S., & Pypendop, B. H. (2020). Pharmacokinetics of ketamine following a short intravenous infusion to isoflurane-anesthetized New Zealand White rabbits (Oryctolagus cuniculus). VETERINARY ANAESTHESIA AND ANALGESIA, 47(3), 334–340. https://doi.org/10.1016/j.vaa.2020.02.002

Keywords: analgesic agent; Analgesics; anesthesia; Anesthetics, Inhalationanimal experiment; compartment model; controlled study; elimination half-life; Infusions, Intravenous; inhalation anesthetic agent; intravenous drug administration; isoflo; Isoflurane; ketamine; Leporidae; limit of agreement; liquid chromatography-mass spectrometry; metabolic clearance; metabolism; minimum lung alveolus concentration; New Zealand White (rabbit); norketamine; pharmacokinetic parameters; pharmacokinetics; plasma concentration-time curve; Prospective Studies; rabbits; veterinary medicine; volume of distribution at steady-state; zetamine

Zhang, P., Li, Y., & Xu, T. (2020). Development of a simple method for differential delivery of volatile anesthetics to the spinal cord of the rabbit. *PLOS ONE*, *15*(2). https://doi.org/10.1371/journal.pone.0223700

Keywords: anesthesia induction; Anesthetics, Inhalation; animal experiment; Brain; controlled study; descending aorta; drug delivery system; drug effect; Emulsions; femoral vein; Femoral Vein; inhalation anesthetic agent; Isoflurane; Jugular Veins; Leporidae; Lung; metabolism; Methods; minimally invasive procedure; New Zealand White (rabbit); Partial Pressure; procedures; Rabbits; Sevoflurane; Spinal cord; Volatilization

Parenteral Techniques

30 citations

Boudra, A., Benbelkacem, I., Merati, R., Achour, H., & Daouadji, I. D. (2020). Comparison between three fixed anaesthesia protocols in rabbits. Journal of Preventive Veterinary Medicine, 44(3), 99–103. https://doi.org/10.13041/jpvm.2020.44.3.99

Keywords: Anesthesia; Rabbits

Bradley, M. P., Doerning, C. M., Nowland, M. H., & Lester, P. A. (2019). Intramuscular Administration of Alfaxalone Alone and in Combination for Sedation and Anesthesia of Rabbits (Oryctolagus cuniculus). JOURNAL OF THE AMERICAN ASSOCIATION FOR LABORATORY ANIMAL SCIENCE, 58(2), 216–222. https://doi.org/10.30802/AALAS-JAALAS-18-000078

Keywords: alfaxalone; alfaxan; Anesthesia; Anesthesia/veterinary; anesthetic agent; Anesthetics; Anesthetics/administration & dosage/pharmacology; animal experiment; Butorphanol; butorphanol tartrate; Butorphanol/administration & dosage/pharmacology; combination drug therapy; controlled study; Cross-Over Studies; crossover procedure; Dexmedetomidine; Dexmedetomidine/administration & dosage/pharmacology; Drug Therapy, Combination; ear; FR; Heart rate; HR; Hypnotics and Sedatives; Hypnotics and Sedatives/administration & dosage/pharmacology; Injections, Intramuscular; intramuscular drug administration; laboratory; Laboratory Animal Science; Leporidae; midazolam; Midazolam/administration & dosage/pharmacology; nociceptive stimulation; Oryctolagus cuniculus; Pregnanediones; Pregnanediones/administration & dosage/pharmacology; Rabbits; recumbency; Respiratory rate; righting reflex; sedation; stimulus response; toe; veterinary medicine

Cardoso, C. G., Ayer, I. M., Jorge, A. T., Honsho, C. S., & Mattos-Junior, E. (2020). A comparative study of the cardiopulmonary and sedative effects of a single intramuscular dose of ketamine anesthetic combinations in rabbits. RESEARCH IN VETERINARY SCIENCE, 128, 177–182. https://doi.org/10.1016/j.rvsc.2019.11.016

Keywords: Acepromazine; Acepromazine/administration & dosage/adverse effects/pharmacology; Anesthesia; Anesthesia Recovery Period; Anesthesia/veterinary; anesthetic agent; anesthetic recovery; Anesthetics; Anesthetics/pharmacology; Arterial Pressure/drug effects; Benzodiazepine; breathing rate; Cross-Over Studies; crossover procedure; Dexmedetomidine; Dexmedetomidine/administration & dosage/adverse effects/pharmacology; Dissociative anesthetic; Drug Combinations; Heart Rate; Heart Rate/drug effects; Hypnotics and Sedatives; Hypoxia; Injections, Intramuscular/veterinary; intramuscular drug administration; ketamine; Ketamine/administration & dosage/adverse effects/pharmacology; Leporidae; midazolam; Midazolam/administration & dosage/adverse effects/pharmacology; Phenothiazine; prospective study; Rabbits; Respiratory Rate; Respiratory Rate/drug effects; veterinary medicine; Xylazine; Xylazine/administration & dosage/adverse effects/pharmacology; α2-agonists

de Mattos-Junior, E., da Cunha, O., Moraes Barros, L. F., Hamad Minervino, A. H., Nishimura, L. T., Gosuen Gonalves Dias, L. G., & Gaido Cortopassi, S. R. (2014). Dissociative anesthetic combination reduces intraocular pressure (IOP) in rabbits. SEMINA-CIENCIAS AGRARIAS, 35(2), 905–909. https://doi.org/10.5433/1679-0359.2014v35n2p905

Keywords: Ketamine; Midazolam; Oryctolagus cuniculus; Tiletamine; Xylazine; Zolazepam

Holve, D. L., Gum, G. G., & Pritt, S. L. (2013). Effect of Sedation with Xylazine and Ketamine on Intraocular Pressure in New Zealand White Rabbits. JOURNAL OF THE AMERICAN ASSOCIATION FOR LABORATORY ANIMAL SCIENCE, 52(4), 488–490.

Keywords: animal experiment; controlled study; experimental rabbit; Hypnotics and Sedatives; Intraocular pressure; ketamine; Rabbits; sedation; tonometry; Xylazine

Ishikawa, Y., Sakata, H., Tachibana, Y., Itami, T., Oyama, N., Umar, M. A., Sano, T., & Yamashita, K. (2019). Sedative and physiological effects of low-dose intramuscular alfaxalone in rabbits. JOURNAL OF VETERINARY MEDICAL SCIENCE, 81(6), 851–856. https://doi.org/10.1292/jvms.18-0618

Keywords: alfaxalone; blood; Blood Pressure; breathing rate; dose response; Dose-Response Relationship, Drug; drug effect; Heart Rate; Hypnotics and Sedatives; Injections, Intramuscular; intramuscular administration; intramuscular drug administration; Leporidae; Oxygen; Pregnanediones; rabbits; Reflex, Righting; Respiratory Rate; sedation; veterinary medicine

Khan, M. A., Tunio, A. N., Ahmad, A., Kachiwa, A. B., Malhi, M. C., Khan, A., Qasim, M., Said, A., Khan, R. U., & Khan, M. (2019). Comparative study of isoflurane and ketamine anesthetics in Rabbits. Pesquisa Agropecuaria Brasileira, 8(2), 1385–1397. Scopus. https://doi.org/10.19045/BSPAB.2019.80079

Keywords: Anesthesia; Isoflurane; Ketamine; Physiology; Rabbits

Kirazoglu, E., Yavuz, O., & Yavuz, U. (2020). Evaluation of hemodynamic, hematological parameters and the clinical effects of dexmedetomidine-ketamine and xylazine-ketamine anesthesia in rabbits. TURKISH JOURNAL OF VETERINARY & ANIMAL SCIENCES, 44(4), 791–797. https://doi.org/10.3906/vet-1912-12

Keywords: alfazyne; Anesthesia; animal experiment; animal model; arterial oxygen saturation; Blood gases; breathing rate; controlled study; Dexmedetomidine; diastolic blood pressure; heart rate; hematological parameters; Hemodynamic parameters; hipnodex; ketamine; Leporidae; mean arterial pressure; Reflex times; retinol; systolic blood pressure; xylazine; LL882; rabbits; Veterinary Pharmacology and Anaesthesiology

Kirihara, Y., Takechi, M., Kurosaki, K., Matsuo, H., Kajitani, N., & Saito, Y. (2019). Effects of an anesthetic mixture of medetomidine, midazolam, and butorphanol and antagonism by atipamezole in rabbits. EXPERIMENTAL ANIMALS, 68(4), 443–452. https://doi.org/10.1538/expanim.18-0183

Keywords: Adrenergic alpha-2 Receptor Antagonists; alpha 2 adrenergic receptor blocking agent; alpha 2 adrenergic receptor stimulating agent; Analgesics, Opioid; anesthesia; anesthetic agent; Anesthetic mixture; Anesthetics, Combined; animal experiment; animal model; Antagonist; antagonistic effect; atipamezole; Blood pressure; breathing rate; Butorphanol; celactar; comparative study; cornea reflex; diastolic blood pressure; drug antagonism; heart rate; Hypnotics and Sedatives; imidazole derivative; Imidazoles; Injections, Intramuscular; Injections, Intravenous; intramuscular drug administration; intravenous drug administration; ketamine; Leporidae; Medetomidine; midazolam; midazolam maleate; narcotic analgesic agent; oxygen saturation; pentobarbital; Rabbits; systolic blood pressure; vetorphale; Xylazine

Li, R., Zhang, W., Liu, J., Tang, M., Yang, Y., & Luo, N.-F. (2012). Minimum infusion rates and recovery times from different durations of continuous infusion of fospropofol, a prodrug of propofol, in rabbits: A comparison with propofol emulsion. Veterinary Anaesthesia and Analgesia, 39(4), 373–384. https://doi.org/10.1111/j.1467-2995.2012.00733.x

Keywords: Anesthesia Recovery Period; Anesthesia, Intravenous/methods/veterinary; Anesthetics, Intravenous/administration & dosage; Emulsions; Prodrugs/administration & dosage; Propofol/administration & dosage/analogs & derivatives; Rabbits; Time Factors

Liu, Y., Xu, X., Xie, J., Ma, H., Wang, T., Zhang, G., & Li, Q. (2016). Design, Synthesis, and Biological Evaluation of Novel CNS 7056 Derivatives as Sedatives in Rats and Rabbits. CHEMICAL BIOLOGY & DRUG DESIGN, 88(1), 38–42. https://doi.org/10.1111/cbdd.12731

Keywords: Benzodiazepines/chemical synthesis; Benzodiazepines/chemistry; Benzodiazepines/pharmacology; CNS 7056 derivatives; Hypnotics and Sedatives/chemical synthesis; Hypnotics and Sedatives/chemistry; Hypnotics and Sedatives/pharmacology; Mice; Rabbits; Rats; sedation; Structure-Activity Relationship

Luca, G. C., Barter, L. S., & Pypendop, B. H. (2020). Pharmacokinetics of ketamine following a short intravenous infusion to isoflurane-anesthetized New Zealand White rabbits (Oryctolagus cuniculus). VETERINARY ANAESTHESIA AND ANALGESIA, 47(3), 334–340. https://doi.org/10.1016/j.vaa.2020.02.002

Keywords: analgesic agent; Analgesics; anesthesia; Anesthetics, Inhalation; animal experiment; compartment model; controlled study; elimination half-life; Infusions, Intravenous; inhalation anesthetic agent; intravenous drug administration; isoflo; Isoflurane; ketamine; Leporidae; limit of agreement; liquid chromatography-mass spectrometry; metabolic clearance; metabolism; minimum lung alveolus concentration; New Zealand White (rabbit); norketamine; pharmacokinetic parameters; pharmacokinetics; plasma concentration-time curve; Prospective Studies; rabbits; veterinary medicine; volume of distribution at steady-state; zetamine

Marin, P., Belda, E., Laredo, F. G., Torres, C. A., Hernandis, V., & Escudero, E. (2020). Pharmacokinetics and sedative effects of alfaxalone with or without dexmedetomidine in rabbits. RESEARCH IN VETERINARY SCIENCE, 129, 6–12. https://doi.org/10.1016/j.rvsc.2019.12.015

Keywords: Alfaxalone; alfaxan; Anaesthesia; anesthetic agent; Anesthetics; animal experiment; blood sampling; breathing rate; conscious sedation; controlled study; convalescence; Cross-Over Studies; cyanosis; deep sedation; Dexmedetomidine; drug bioavailability; drug disposition; heart arrhythmia; heart rate; high performance liquid chromatography; Hypnotics and Sedatives; Injections, Intramuscular; Injections, Intravenous; intramuscular drug administration; intravenous drug administration; Leporidae; mean residence time; monotherapy; New Zealand White (rabbit); numeric rating scale; nystagmus; Pharmacokinetics; plasma concentration-time curve; Pregnanediones; Rabbits; Random Allocation; randomization; randomized controlled trial; recumbency; sedation; single drug dose; standing; study design; treatment duration; tremor; veterinary medicine

Mazaheri-Khameneh, R., Sarrafzadeh-Rezaei, F., Asri-Rezaei, S., & Dalir-Naghadeh, B. (2012). Comparison of time to loss of consciousness and maintenance of anesthesia following intraosseous and intravenous administration of propofol in rabbits. JAVMA-JOURNAL OF THE AMERICAN VETERINARY MEDICAL ASSOCIATION, 241(1), 73–80. https://doi.org/10.2460/javma.241.1.73

Keywords: Anesthesia Recovery Period; Anesthesia, Intravenous; Anesthesia, Intravenous/methods/veterinary; anesthetic recovery; Anesthetics, Intravenous/administration &

dosage; animal disease; Blood Gas Analysis/veterinary; Blood Pressure; Blood Pressure/drug effects; breathing rate; comparative study; drug effect; Heart Rate; Heart Rate/drug effects; Infusions, Intraosseous; Infusions, Intraosseous/veterinary; Infusions, Intravenous; Infusions, Intravenous/veterinary; Injections, Intravenous; Injections, Intravenous/veterinary; intraosseous drug administration; intravenous anesthesia; intravenous anesthetic agent; intravenous drug administration; methodology; Oryctolagus cuniculus; physiology; Propofol; Propofol/administration & dosage; Rabbits/physiology; Random Allocation; randomization; Respiratory Rate; Respiratory Rate/drug effects; Time Factors

Mencalha, R., dos Santos Sousa, C. A., Costa, O., & Abidu-Figueiredo, M. (2016). Ultrasound and gross anatomy of the brachial plexus and major nerves of the forelimb. An anesthetic approach using the domestic rabbit (Oyctolagus cuniculus) as an experimental model. ACTA CIRURGICA BRASILEIRA, 31(4), 218–226. https://doi.org/10.1590/S0102-865020160040000001

Keywords: Models, Animal; Anatomic Landmarks; Anesthetics, Local/administration & dosage; Axilla/blood supply/innervation; Axillary Artery/anatomy & histology; Brachial Plexus Block/methods/veterinary; Brachial Plexus/anatomy & histology/diagnostic imaging; Forelimb/innervation; Rabbits; Reproducibility of Results; Ultrasonography/methods

Minh Huynh, Poumeyrol, S., Pignon, C., Le Teuff, G., & Zilberstein, L. (2015). Intramuscular administration of alfaxalone for sedation in rabbits. VETERINARY RECORD, 176(10), 255-+. https://doi.org/10.1136/vr.102522

Keywords: alfaxalone; Analgesia; Anesthesia; Anesthesia/methods/veterinary; anesthetic agent; Anesthetics; Anesthetics/administration & dosage; clinical trial; Cross-Over Studies; Dose-Response Relationship, Drug; Injections, Intramuscular; Injections, Intramuscular/veterinary; intramuscular drug administration; Oryctolagus cuniculus; Pregnanediones; Pregnanediones/administration & dosage; rabbits; veterinary

Ogawa, S., Watanabe, M., Kawaai, H., Tada, H., & Yamazaki, S. (2014). Lidocaine concentration in mandibular bone after subperiosteal infiltration anesthesia decreases with elevation of periosteal flap and irrigation with saline. Anesthesia Progress, 61(2), 53–62. https://doi.org/10.2344/0003-3006-61.2.53

Keywords: Anesthesia, Local/methods; Anesthetics, Local/administration & dosage/analysisBone Density/physiology; Chromatography, High Pressure Liquid; Imaging, Three-Dimensional/methods; Infiltration anesthesia.; Injections; Jawbone; Lidocaine concentration; Lidocaine/administration & dosage/analysis; Mandible/chemistry; Periosteal flap; Periosteum/surgery; Rabbits; Sodium Chloride/administration & dosage; Surgical Flaps/surgery; Therapeutic Irrigation/methods; Time Factors; X-Ray Microtomography/methods

Oguntoye, C. O., Oyewande, O. A., & Afolabi, O. O. (2018). Evaluation of tramadol-midazolam-ketamine anaesthesia in rabbits. Nigerian Journal of Physiological Sciences, 33(2), 145–149. Scopus.

Keywords: Anaesthesia; Analgesia; anesthetic agent; Anesthetics; body temperature; Body Temperature; drug effect; Heart Rate; ketamine; Leporidae; midazolam; pain; Pain; physiology; Rabbits; tramadol; Tramadol; Xylazine

Ong, B. H. E., Hidaka, Y., Kaneko, Y., Yamamoto, S., Mizutani, S., Sekiguchi, S., Torisu, S., & Naganobu, K. (2020). Effects of a single-bolus bupivacaine injection into the coccygeal spinal canal of rabbits. JOURNAL OF VETERINARY MEDICAL SCIENCE, 82(2), 197–203. https://doi.org/10.1292/jvms.19-0555

Keywords: adverse event; Analgesia; Anesthesia, Local; Anesthesia, Local/adverse effects/veterinary; Anesthetics, Local; Anesthetics, Local/administration & dosage; animal experiment; anus sphincter; Bupivacaine; Bupivacaine/administration & dosage; coccyx; Contrast Media; contrast medium; contrast medium extravasation; controlled study; Epidural anesthesia; epidural drug administration; epidural single-bolus injection technique; Epidural single-bolus injection technique; epidural space; Extravasation of Diagnostic and Therapeutic Materials/veterinary; hindlimb; Injections, Epidural; Injections, Epidural/adverse effects/methods/veterinary; Iohexol; iopaque 300; Leporidae; local anesthesia; local anesthetic agent; nociception; proprioception; rabbits; reflex; sodium chloride; Spinal Canal; tail; vertebral canal; veterinary medicine; walking

Papp, H., Sarusi, A., Farkas, A. S., Takacs, H., Kui, P., Vincze, D., Ivany, E., Varro, A., Papp, J. G., Forster, T., & Farkas, A. (2016). HYPERVENTILATION ASSISTS PROARRHYTHMIA DEVELOPMENT DURING DELAYED REPOLARIZATION IN CLOFILIUM-TREATED, ANAESTHETIZED, MECHANICALLY VENTILATED RABBITS. JOURNAL OF PHYSIOLOGY AND PHARMACOLOGY, 67(5), 731–737.

Keywords: Adrenergic alpha-1 Receptor Agonists; alpha 1 adrenergic receptor stimulating agent; Anti-Arrhythmia Agents; Arrhythmia; Arrhythmias, Cardiac; artificial ventilation; blood; blood carbon dioxide tension; Blood Gas Monitoring, Transcutaneous; chemically induced; clofilium; clofilium tosylate; controlled study; Delayed rectifier potassium current; Delayed repolarization; Electrocardiography; heart arrhythmia; heart proarrhythmia; heart repolarization; heart ventricle arrhythmia; Hyperventilation; Hypocapnia; Hypokalemia; pathophysiology; Phenylephrine; Potassium; Potassium Channel Blockers; potassium channel blocking agent; potassium current; Proarrhythmia; QT interval; Quaternary Ammonium Compounds; quaternary ammonium derivative; Rabbits and hares; Respiration, Artificial; Respiratory alkalosis; retrospective study; Torsades de pointes; transcutaneous oxygen monitoring

Raulic, J., Leung, V. S. Y., Doss, G. A., Graham, J. E., Keller, K. A., Mans, C., Sadar, M. J., Vergneau-Grosset, C., & Pang, D. S. J. (2021). Development and Testing of a Sedation Scale for Use in Rabbits (Oryctolagus cuniculus). JOURNAL OF THE AMERICAN ASSOCIATION FOR LABORATORY ANIMAL SCIENCE, 60(5), 549–555. https://doi.org/10.30802/AALAS-JAALAS-21-000002

Keywords: Anesthesia; Sedation; Rabbits

Reichert, P., Rutowski, R., Kielbowicz, Z., Kuryszko, J., & Kielbowicz, M. (2013). General intravenous anesthesia for brachial plexus surgery in the rabbit. POLISH JOURNAL OF VETERINARY SCIENCES, 16(4), 755–756. https://doi.org/10.2478/pjvs-2013-0108

Keywords: Rabbits; analgesic agent; Analgesics; Analgesics/administration & dosage/pharmacology; Anesthesia, Intravenous; Anesthesia, Intravenous/veterinary; Anesthetics, Intravenous; Anesthetics, Intravenous/administration & dosage/pharmacology; animal disease; Brachial Plexus; Brachial Plexus/surgery; Butorphanol; Butorphanol/administration & dosage/pharmacology; Hypnotics and Sedatives; Hypnotics and Sedatives/administration & dosage/pharmacology; Injectable anesthetics; intravenous anesthesia; ketamine; Ketamine/administration & dosage/pharmacology; Medetomidine; Medetomidine/administration & dosage/pharmacology; Propofol; Propofol/administration & dosage/pharmacology; Rabbits

Rickyawan, N. (2020). Comparison of the anesthetic effects between acepromazine-ketamine-xylazine and acepromazine-ketamine-medetomidine on rabbit liver and kidney function. Veterinary Practitioner, 21(2), 494–496. Scopus.

Keywords: Acepromazine; Ketamine; Kidney; Liver; Medetomidine; rabbits; Xylazine

Rousseau-Blass, F., & Pang, D. S. J. (2020). Hypoventilation following oxygen administration associated with alfaxalone-dexmedetomidine-midazolam anesthesia in New Zealand White rabbits. VETERINARY ANAESTHESIA AND ANALGESIA, 47(5), 637–646. https://doi.org/10.1016/j.vaa.2020.04.012

Keywords: alfaxalone; anesthetic agent; anesthetic recovery; Anesthetics; animal experiment; arterial oxygen saturation; bicarbonate; blood gas analysis; breathing rate; controlled study; Dexmedetomidine; endotracheal intubation; euthanasia; heart auscultation; heart rate; hypercapnia; Hypoventilation; hypoxemia; hypoxic respiratory drive; Leporidae; lung ventilation; mean arterial pressure; metabolic acidosis; midazolam; New Zealand rabbit; Oxygen; oxygen therapy; pain assessment; partial pressure; patient monitoring; pH; Pregnanediones; prospective study; pulse oximetry; rabbits; veterinary medicine

Sayce, L. J., Powell, M. E., Kimball, E. E., Chen, P., Gartling, G. J., & Rousseau, B. (2020). Continuous Rate Infusion of Ketamine Hydrochloride and Dexmedetomidine for Maintenance of Anesthesia during Laryngotracheal Surgery in New Zealand White Rabbits (Oryctolagus cuniculus). JOURNAL OF THE AMERICAN ASSOCIATION FOR LABORATORY ANIMAL SCIENCE, 59(2), 176–185. https://doi.org/10.30802/AALAS-JAALAS-19-000076

Keywords: adolescent; Analgesia; Anesthesia; Anesthesia/veterinary; animal experiment; animal model; body temperature; breathing rate; clinical trial; combination drug therapy; continuous infusion; continuous rate infusion; controlled study; CRI; Dexmedetomidine; Dexmedetomidine/administration & dosage/pharmacology; Drug Administration Schedule; drug dose increase; Drug Therapy, Combination; electrostimulation; heart rate; hospital service; Hypnotics and Sedatives; Hypnotics and Sedatives/administration & dosage/pharmacology; intravenous anesthesia; KD; ketamine; ketamine hydrochloride + dexmedetomidine hydrochloride; Ketamine/administration & dosage/pharmacology; larynx injury; larynx spasm; larynx surgery; Leporidae; Lidocaine; Lidocaine/pharmacology; Maintenance; MAP; mean arterial blood pressure; New Zealand White (rabbit); Oryctolagus cuniculus; pentobarbital; phenytoin; phonation; Rabbits/surgery; rectal temperature; sedation; surgery; trachea surgery; veterinary medicine

Udegbunam, R. I., & Udegbunam, S. O. (2014). Anaesthetic potency and physiological effects of refrigerated solution of thiopentone sodium in rabbits. Sokoto Journal of Veterinary Sciences, 12(2), 14–18. CAB Abstracts.

Keywords: anesthesia; anesthetics; blood glucose; glucose in blood; hematocrit; Leporidae; LL070; LL882; rabbits; thiopentone; Veterinary Pharmacology and Anaesthesiology

Udegbunam, R. I., Udegbunam, S. O., Onuba, A. C., & Ugwu, N. E. (2017). Evaluation of the use of pentazocine in combination with diazepam and ketamine for surgical anaesthesia in rabbits. Animal Research International, 14(1), 2562–2567. CAB Abstracts.

Keywords: Animal Surgery and Non-drug Therapy; LL882; LL884; rabbits; Veterinary Pharmacology and Anaesthesiology

Williams, M. D., Long, C. T., Durrant, J. R., McKeon, G. P., Shive, H. R., Griffith, E. H., Messenger, K. M., & Fish, R. E. (2017). Oral Transmucosal Detomidine Gel in New Zealand White Rabbits

(Oryctolagus cuniculus). Journal of the American Association for Laboratory Animal Science : JAALAS, 56(4), 436–442.

Keywords: Rabbits; Administration, Oral; Anesthesia/veterinary; Heart Rate/drug effects; Heart/drug effects; Hypnotics and Sedatives/administration & dosage/adverse effects; Imidazoles/administration & dosage/adverse effects

Zhang, P., Li, Y., & Xu, T. (2020). Development of a simple method for differential delivery of volatile anesthetics to the spinal cord of the rabbit. PLOS ONE, 15(2). https://doi.org/10.1371/journal.pone.0223700

Keywords: anesthesia induction; Anesthetics, Inhalation; animal experiment; Brain; controlled study; descending aorta; drug delivery system; drug effect; Emulsions; Femoral Vein; inhalation anesthetic agent; Isoflurane; Jugular Veins; Leporidae; Lung; metabolism; Methods; minimally invasive procedure; New Zealand White (rabbit); Partial Pressure; procedures; Rabbits; Sevoflurane; Spinal cord; Volatilization

Zhou, Y., He, M., Zou, T., & Yu, B. (2015). Morphological changes in the sciatic nerve, skeletal muscle, heart and brain of rabbits receiving continuous sciatic nerve block with 0.2% ropivacaine. INTERNATIONAL JOURNAL OF CLINICAL AND EXPERIMENTAL PATHOLOGY, 8(11), 13911–13920.

Keywords: Amides; Amides/administration & dosage/toxicity; Anesthetics, Local; Anesthetics, Local/administration & dosage/toxicity; Brain; Brain/drug effects/metabolism; cardiac muscle; Cell Shape; Cell Shape/drug effects; chemically induced; Continuous nerve block; drug effects; Edema; Edema/chemically induced/pathology; Heart; Heart/drug effects; Infusions, Parenteral; innervation; local anesthetic agent; metabolism; Morphology; Motor Activity; Motor Activity/drug effects; Muscle, Skeletal; Muscle, Skeletal/drug effects/innervation/pathology; Myocardium; Myocardium/pathology; Necrosis; Nerve Block; Nerve Block/methods; nerve degeneration; Nerve Degeneration; Neurotoxicity Syndromes; Neurotoxicity Syndromes/etiology/pathology/physiopathology; parenteral drug administration; pathology; pathophysiology; procedures; Rabbits and hares; Ropivacaine; Sciatic Nerve; Sciatic Nerve/drug effects/pathology/physiopathology; skeletal muscle; Time Factors

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40 citations

Aksenov, D. P., Li, L., Miller, M. J., Iordanescu, G., & Wyrwicz, A. M. (2015). Effects of anesthesia on BOLD signal and neuronal activity in the somatosensory cortex. *Journal of Cerebral Blood Flow and Metabolism : Official Journal of the International Society of Cerebral Blood Flow and Metabolism*, *35*(11), 1819–1826. https://doi.org/10.1038/jcbfm.2015.130

Keywords: Anesthesia; Anesthetics, Inhalation/pharmacology; Anesthetics, Intravenous/pharmacology; Brain Mapping/methods; Evoked Potentials/drug effects; Fentanyl/pharmacology; Isoflurane/pharmacology; Magnetic Resonance Imaging/methods; Neurons/drug effects; Oxygen/blood; Physical Stimulation; Rabbits; Somatosensory Cortex/anatomy & histology/drug effects; Vibrissae/drug effects/innervation

Bailey, R. S., Barter, L. S., & Pypendop, B. H. (2017). Pharmacokinetics of dexmedetomidine in isoflurane-anesthetized New Zealand White rabbits. *VETERINARY ANAESTHESIA AND ANALGESIA*, *44*(4), 876–882. https://doi.org/10.1016/j.vaa.2017.01.003

Keywords: analgesia; anesthesia; Anesthesia, Inhalation; Anesthesia, Inhalation/veterinary; anesthetic agent; Anesthetics, Combined/pharmacology; Anesthetics, Inhalation; animal experiment; compartment model; Dexmedetomidine; Dexmedetomidine/administration & dosage/pharmacokinetics; drug blood level; drug concentration; drug distribution; experimental study; Hypnotics and Sedatives; Hypnotics and Sedatives/administration & dosage/pharmacology; Infusions, Intravenous; Infusions, Intravenous/veterinary; inhalation anesthesia; inhalation anesthetic agent; intravenous drug administration; IsoFlo; Isoflurane; Leporidae; limit of quantitation; mass spectrometry; mathematical model; minimum lung alveolus concentration; New Zealand White (rabbit); nonlinear regression analysis; Rabbits; Ringer lactate solution; veterinary

Barter, L. S., Hawkins, M. G., & Pypendop, B. H. (2015). Effects of fentanyl on isoflurane minimum alveolar concentration in New Zealand White rabbits (Oryctolagus cuniculus). *American Journal of Veterinary Research*, *76*(2), 111–115. https://doi.org/10.2460/ajvr.76.2.111

Keywords: Anesthesia, Inhalation; Anesthetics, Inhalation/administration & dosage/pharmacokinetics; Anesthetics, Intravenous/administration & dosage/blood/pharmacologyBody Temperature/drug effects; Fentanyl/administration & dosage/blood/pharmacology; Isoflurane/administration & dosage/pharmacokinetics; Pulmonary Alveoli/metabolism; Rabbits

Barter, L. S., & Pypendop, B. H. (2020). Plasma dopamine concentrations following dopamine infusion to isoflurane-anesthetized New Zealand White rabbits. *VETERINARY ANAESTHESIA AND ANALGESIA*, *47*(2), 219–223. https://doi.org/10.1016/j.vaa.2019.11.007

Keywords: adrenergic receptor stimulating agent; anesthesia; Anesthetics, Inhalationanimal experimentarterial gas; blood; clinical trial; compartment model; descriptive research; Dopamine; dopamine blood level; drug blood level; drug clearance; Drug Interactions; inhalation anesthetic agent; Isoflurane; Leporidae; New Zealand White (rabbit); oxygen; prospective study; rabbits; Sympathomimetics; volume of distribution

Belmonte, E. A., Nunes, N., Lopes, P. C. F., Gering, A. P., Moro, J. V., & Faria, E. G. (2015). Cardiovascular variables in rabbits anesthetized with isoflurane and subarachnoid anesthesia with levobupivacaine or lidocaine. *Revista Portuguesa de Ciencias Veterinarias*, *110*(595–596), 133–139.

Keywords: Anesthesia; Isoflurane; Inhalation Anesthesia; Levobupivacaine; lidocaine

Chiba, T., Sakuma, K., Komatsu, T., Cao, X., Aimoto, M., Nagasawa, Y., Shimizu, K., Takahashi, M., Hori, Y., Shirai, K., & Takahara, A. (2019). Physiological role of nitric oxide for regulation of arterial stiffness in anesthetized rabbits. *Journal of Pharmacological Sciences*, *139*(1), 42–45. Scopus. https://doi.org/10.1016/j.jphs.2018.11.003

Keywords: Acetylcholine; Anesthesia; animal experiment; animal tissue; Arterial Pressure; Arterial stiffness; Arteries; artery blood flow; cardio ankle vascular index; cardiovascular parameters; controlled study; diastolic blood pressure; drug effect; Heart Rate; L-NAME; Leporidae; n(g) nitroarginine methyl ester; NG-Nitroarginine Methyl Ester; Nitric oxide; physiology; pulse wave; Rabbits; regulatory mechanism; systolic blood pressure; Vascular Resistance; Vascular Stiffness

Crotaz, I. R. (2013). An observational clinical study in cats and rabbits of an anatomically designed supraglottic airway device for use in companion animal veterinary anaesthesia. *VETERINARY RECORD*, *172*(23), 606-+. https://doi.org/10.1136/vr.100668

Keywords: Airway Management; Anesthesia; anesthesiology; Anesthesiology; animal disease; Cats; endotracheal intubation; equipment; histology; Intubation, Intratracheal; methodology; Oryctolagus cuniculus; physiology; pilot study; rabbits; respiration control

Divya Chaudhari, Mistry, J. N., Tyagi, S. K., Jhala, S. K., & Suthar, D. N. (2017). Comparison of face mask and endotracheal intubation techniques for general anaesthesia in rabbits. *Indian Journal of Veterinary Surgery*, *38*(1), 11–13. CAB Abstracts.

Keywords: Animal Surgery and Non-drug Therapy; LL882; LL884; rabbits; Veterinary Pharmacology and Anaesthesiology

Duke-Novakovski, T., Fujiyama, M., & Beazley, S. G. (2020). Comparison of mainstream (Capnostat 5) and two low-flow sidestream capnometers (VM-2500-S and Capnostream) in spontaneously breathing rabbits anesthetized with a Bain coaxial breathing system. *VETERINARY ANAESTHESIA AND ANALGESIA*, *47*(4), 537–546. https://doi.org/10.1016/j.vaa.2020.02.006

Keywords: amperometry; Anesthesia; anesthesia circuits; anesthesia induction; Anesthesia/veterinary; arterial carbon dioxide tension; arterial pressure; artificial ventilation; blood carbon dioxide tension; blood gas analysis; breathing rate; Capnography; Capnography/instrumentation/veterinary; capnometry; carbon dioxide; cardiac index; comparative study; Cross-Over Studies; defibrillation; devices; echography; end tidal carbon dioxide tension; endotracheal intubation; gas exchange; heart output; heart rate; high performance liquid chromatography; infrared spectroscopy; Intubation, Intratracheal/veterinary; Leporidae; lung ventilation; mean arterial pressure; monitoring; New Zealand White (rabbit); oscillometry; oxygen saturation; prospective study; pulse oximetry; rabbits; signal noise ratio; veterinary medicine

Eatwell, K. (2012). *Use of a novel laryngeal mask to maintain gaseous anaesthesia in rabbits (Oryctolagus cuniculus).* 461. CAB Abstracts. https://search.ebscohost.com/login.aspx?direct=true&db=lah&AN=20123226318&site=ehost-live

Keywords: Leporidae; LL070; LL882; Oryctolagus cuniculus; rabbits; Techniques and Methodology; Veterinary Pharmacology and Anaesthesiology; ZZ900

Eatwell, K., & Mancinelli, E. (2013). Anaesthesia guidelines for airway management in rabbits. *Veterinary Times*, *43*(11), 14...17. CAB Abstracts.

Keywords: anesthesia; drug action; LL070; LL860; LL882; lung diseases; mechanism of drug action; Non-Communicable Diseases and Injuries of Animals; rabbits; recommendations; Techniques and Methodology; Veterinary Pharmacology and Anaesthesiology; ZZ900

Erbas, M., Toman, H., Sahin, H., Kiraz, H. A., Barutcu, A., Simsek, T., Yener, A. U., Uzun, M., & Altinisik, U. (2014). Comparison of effects of sugammadex and neostigmine on QT(c) prolongation in rabbits under general anesthesia. *ACTA CIRURGICA BRASILEIRA*, *29*(12), 807–811. https://doi.org/10.1590/S0102-86502014001900007

Keywords: androstane derivative; Androstanols; anesthesia induction; Anesthesia Recovery Period; Anesthesia, General; anesthetic recovery; animal experiment; animal model; antagonists and inhibitors; Arterial Pressure; atropine; blood gas analysis; cholinesterase inhibitor; Cholinesterase Inhibitors; comparative study; controlled study; drug effects; electrocardiography; Electrocardiography; fentanyl; gamma cyclodextrin derivative; gamma-Cyclodextrins; general anesthesia; Heart; heart function; Heart Rate; mean arterial pressure; Models, Animal; Neostigmine; outcome assessment; procedures; propofol; QT prolongation; quantitative analysis; rabbits; Random Allocation; randomization; rocuronium; Sugammadex; Time Factors

Gosliga, J. M., & Barter, L. S. (2015). Cardiovascular effects of dopamine hydrochloride and phenylephrine hydrochloride in healthy isoflurane-anesthetized New Zealand White rabbits (Oryctolagus cuniculus). *AMERICAN JOURNAL OF VETERINARY RESEARCH*, *76*(2), 116–121. https://doi.org/10.2460/ajvr.76.2.116

Keywords: Animal Health and Hygiene (General); Animal Physiology and Biochemistry (Excluding Nutrition); LL600; LL800; LL822; LL860; LL882; Non-Communicable Diseases and Injuries of Animals; Oryctolagus cuniculus; Protozoan, Helminth, Mollusc and Arthropod Parasites of Animals; rabbits; Veterinary Pharmacology and Anaesthesiology

Heiberg, J., Royse, C. F., Royse, A. G., & Andrews, D. T. (2018). Propofol Attenuates the Myocardial Protection Properties of Desflurane by Modulating Mitochondrial Permeability Transition. *Anesthesia and Analgesia*, *127*(2), 387–397. https://doi.org/10.1213/ANE.0000000000003450

Keywords: Anesthesia; Anesthetics, Intravenous/therapeutic use; Cardiotonic Agents/therapeutic use; Deoxyglucose/metabolism; Desflurane/therapeutic use; Drug Administration Schedule; Hemodynamics; Isoflurane/therapeutic use; Mitochondria/metabolism; Myocardial Infarction/prevention & control; Myocardial Reperfusion Injury/prevention & control; Myocardium/pathology; Perfusion; Permeability; Propofol/therapeutic use; Rabbits; Random Allocation; Rats, Sprague-Dawley; Reperfusion Injury

Hess, L., Votava, M., Malek, J., Kurzova, A., & Sliva, J. (2016). Sedative Effects of Intranasal Oxytocin in Rabbits and Rhesus Monkeys. *PHYSIOLOGICAL RESEARCH*, *65*, S473–S480. https://doi.org/10.33549/physiolres.933513

Keywords: Administration, Intranasal; Aggression; animal; Anti-Anxiety Agents; Anxiety; anxiolytic agent; Blood Pressure; drug effects; Heart Rate; hypnotic sedative agent; Hypnotics and Sedatives; intranasal drug administration; Macaca mulatta; Monkeys; Oxytocin; physiology; Rabbits and hares; Random Allocation; randomization; rhesus monkey; Sedation

Kasahara, M., Ichinohe, T., Okamoto, S., Okada, R., Kanbe, H., & Matsuura, N. (2015). Concomitant administration of nitrous oxide and remifentanil reduces oral tissue blood flow without decreasing blood pressure during sevoflurane anesthesia in rabbits. *JOURNAL OF ANESTHESIA*, *29*(3), 421–425. https://doi.org/10.1007/s00540-014-1944-1

Keywords: Anesthesia; Anesthesia/methods; Arterial Pressure; Arterial Pressure/drug effects; artificial ventilation; Blood Pressure; Blood Pressure/drug effects; drug effects; ether derivative; Heart Rate; Heart Rate/drug effects; Hemodynamics; Hemodynamics/drug effects; mandible; Mandible; Masseter Muscle; Masseter Muscle/metabolism; metabolism; Methyl Ethers; Methyl Ethers/administration & dosage; Nitrous Oxide; Nitrous Oxide/pharmacology; Oral tissue blood flow; piperidine derivative; Piperidines; Piperidines/pharmacology; procedures; rabbits; Remifentanil; Respiration, Artificial; Respiration, Artificial/methods; Sevoflurane; Tongue; Tongue/blood supply; Tracheotomy; vascularization

Khan, M. A., Tunio, A. N., Ahmad, A., Kachiwa, A. B., Malhi, M. C., Khan, A., Qasim, M., Said, A., Khan, R. U., & Khan, M. (2019). Comparative study of isoflurane and ketamine anesthetics in Rabbits. *Pesquisa Agropecuaria Brasileira*, *8*(2), 1385–1397. Scopus. https://doi.org/10.19045/BSPAB.2019.80079

Keywords: Anesthesia; Isoflurane; Ketamine; Physiology; Rabbits

Kobayashi, A., Kasahara, M., Koshika, K., Akiike, Y., Matsuura, N., & Ichinohe, T. (2021). Remifentanil infusion during desflurane anesthesia reduces tissue blood flow while maintaining blood pressure and tissue oxygen tension in the masseter muscle and mandibular bone marrow. *The Journal of Veterinary Medical Science*, *83*(1), 62–68. https://doi.org/10.1292/jvms.20-0212

Keywords: Anesthesia/veterinary; Anesthetics, Inhalation/pharmacology; Isoflurane/pharmacology; Methyl Ethers/pharmacology; Anesthetics, Intravenous/pharmacology; Blood Pressure; Bone Marrow; Desflurane/pharmacology; Masseter Muscle; oral tissue blood flow; oral tissue oxygen tension; Oxygen; Rabbits; Regional Blood Flow; Remifentanil/pharmacology; sevoflurane; Tongue

Kuwabara, M., Tashiro, H., Nakano, Y., Terasawa, Y., Sawai, H., & Ohta, J. (2018). Comparative Study of Sevoflurane and Isoflurane Anesthesia for the Long-term Safety Evaluation of Visual Prosthesis with Rabbits. *SENSORS AND MATERIALS*, *30*(2), 287–297. https://doi.org/10.18494/SAM.2018.1715

Keywords: Anesthesiology; Anesthetics; Animal experiments; Isoflurane; Long-term safety evaluation; Neural prostheses; Prosthetics; Sevoflurane; Visual prosthesis

Lele, E., Petak, F., Carnesecchi, S., Virag, K., Argiroffo, C. B., & Habre, W. (2013). The Protective Effects of Volatile Anesthestics Against the Bronchoconstriction Induced by an Allergic Reaction in Sensitized Rabbit Pups. *ANESTHESIA AND ANALGESIA*, *116*(6), 1257–1264. https://doi.org/10.1213/ANE.0b013e31828e5ccf

Keywords: airway resistance; anaphylaxis; Anesthetics, Inhalation; animal experiment; animal model; Blood Pressure; breathing mechanics; Bronchoconstriction; bronchospasm; controlled study; desflurane; drug effect; eosinophil count; experimental rabbit; Hypersensitivity; isoflurane; lung hemodynamics; midazolam; minimum lung alveolus concentration; ovalbumin; Ovalbumin; provocation test; Rabbits; sevoflurane; systolic blood pressure; Anesthetics, Inhalation/pharmacology; Blood Pressure/drug effects; Bronchoconstriction/drug effects; Hypersensitivity/physiopathology; Ovalbumin/immunology

Linsenmeier, R. A., Aksenov, D. P., Faber, H. M., Makar, P., & Wyrwicz, A. M. (2016). Spontaneous Fluctuations of PO2 in the Rabbit Somatosensory Cortex. *Advances in Experimental Medicine and Biology*, *876*, 311–317. https://doi.org/10.1007/978-1-4939-3023-4_39

Keywords: Anesthesia; Cerebral cortex; Oxygen; Oxygen/analysis; Rabbits; Somatosensory Cortex/metabolism; Vasomotion

Luca, G. C., Barter, L. S., & Pypendop, B. H. (2020). Pharmacokinetics of ketamine following a short intravenous infusion to isoflurane-anesthetized New Zealand White rabbits (Oryctolagus cuniculus). *VETERINARY ANAESTHESIA AND ANALGESIA*, *47*(3), 334–340. https://doi.org/10.1016/j.vaa.2020.02.002

Keywords: analgesic agent; Analgesics; anesthesia; Anesthetics, Inhalationanimal experiment; compartment model; controlled study; elimination half-life; Infusions, Intravenous; inhalation anesthetic agent; intravenous drug administration; isoflo; Isoflurane; ketamine; Leporidae; limit of agreement; liquid chromatography-mass spectrometry; metabolic clearance; metabolism; minimum lung alveolus concentration; New Zealand White (rabbit); norketamine; pharmacokinetic parameters; pharmacokinetics; plasma concentration-time curve; Prospective Studies; rabbits; veterinary medicine; volume of distribution at steady-state; zetamine

O'Donnell, J., Quail, A., Cottee, D., & White, S. (2014). Effects of sub-anesthetic sevoflurane on cardiorespiratory responses to severe arterial hypoxia in the rabbit. *FASEB JOURNAL*, *28*(1).

Keywords: Anesthetic; Rabbits; Sevoflurane

O'Dwyer, L., Slade, L., & Pickup, S. (2013). Safe delivery of anaesthetic agents in cats and rabbits. *The Veterinary Nurse*, *4*(7), 422–428. CAB Abstracts.

Keywords: administration routes; anesthesia; anesthetics; cats; Engineering and Equipment (General); Felidae; Fissipeda; Leporidae; LL070; LL882; methods; NN000; rabbits; Techniques and Methodology; Veterinary Pharmacology and Anaesthesiology; ZZ900

Okamoto, S., Matsuura, N., & Ichinohe, T. (2015). Effects of Volatile Anesthetics on Oral Tissue Blood Flow in Rabbits: A Comparison Among Isoflurane, Sevoflurane, and Desflurane. *JOURNAL OF ORAL AND MAXILLOFACIAL SURGERY*, *73*(9). https://doi.org/10.1016/j.joms.2015.03.047

Keywords: alveolar bone; analogs and derivatives; Anesthetics, Inhalation; animal experiment; blood flow; blood flowmeter; bone marrow; carotid artery flow; common carotid artery; comparative study; controlled study; desflurane; diastolic blood pressure; Doppler flowmeter; drug effects; ether derivative; heart rate; hemodynamic parameters; inhalation anesthesia; inhalation anesthetic agent; Isoflurane; mandible; masseter muscle; mean arterial pressure; Methyl Ethers; minimum lung alveolus concentration; Mouth; rabbits; Regional Blood Flow; sevoflurane; systolic blood pressure; tissue blood flow; tongue; ultrasound; vascularization

Prosun Biswas, Debaki Ghosh, & Pradip Das. (2012). Intranasal anaesthesia with Xylazine-Ketamine in rabbits. *Indian Journal of Animal Health*, *51*(1), 17–22. CAB Abstracts.

Keywords: Animal Physiology and Biochemistry (Excluding Nutrition); LL600; LL882; rabbits; Veterinary Pharmacology and Anaesthesiology

Richardson, D. (2015). A comparison of the v-gel® supraglottic airway device and non-cuffed endotracheal tube in the time to first capnograph trace during anaesthetic induction in rabbits. *The Veterinary Nurse*, *6*(7), 426–432. CAB Abstracts. https://doi.org/10.12968/vetn.2015.6.7.426

Keywords: anesthesia; Animal Surgery and Non-drug TherapyCC700; intubation; Leporidae; LL070; LL860; LL882; LL884; neutering; Non-Communicable Diseases and Injuries of Animals;

Professions: Practice and Service; rabbits; traumas; Veterinary Pharmacology and Anaesthesiology

Santangelo, B., Micieli, F., Marino, F., Reynaud, F., Cassandro, P., Carfora, A., Petrella, R., Borriello, R., Cataldi, M., & Vesce, G. (2016). Plasma concentrations and sedative effects of a dexmedetomidine, midazolam, and butorphanol combination after transnasal administration in healthy rabbits. *JOURNAL OF VETERINARY PHARMACOLOGY AND THERAPEUTICS*, *39*(4), 408–411. https://doi.org/10.1111/jvp.12282

Keywords: analgesia; animal experiment; antinociception; arterial pressure; butorphanol; capnometry; cardiovascular disease; controlled study; dexmedetomidine; drug absorption; drug activity; drug administration route; drug blood level; heart rate; hypotension; maximum plasma concentration; midazolam; oxygen; pulse oximetry; rabbits; rectum temperature; respiration depression; respiratory tract disease; righting reflex; sedative effect; surgical technique; time to maximum plasma concentration; transnasal drug administration; withdrawal reflex

Santangelo, B., Micieli, F., Mozzillo, T., Reynaud, F., Marino, F., Auletta, L., & Vesce, G. (2016). Transnasal administration of a combination of dexmedetomidine, midazolam and butorphanol produces deep sedation in New Zealand White rabbits. *VETERINARY ANAESTHESIA AND ANALGESIA*, *43*(2), 209–214. https://doi.org/10.1111/vaa.12278

Keywords: Administration, Intranasal; Blood Pressure; Butorphanol; cardiovascular system; Cardiovascular System; deep sedation; Deep Sedation; Dexmedetomidine; drug effects; hypnotic sedative agent; Hypnotics and Sedatives; intranasal drug administration; midazolam; Nasal; rabbits; respiratory system; Respiratory System

Sazuka, S., Matsuura, N., & Ichinohe, T. (2012). Dexmedetomidine Dose Dependently Decreases Oral Tissue Blood Flow During Sevoflurane and Propofol Anesthesia in Rabbits. *JOURNAL OF ORAL AND MAXILLOFACIAL SURGERY*, *70*(8), 1808–1814. https://doi.org/10.1016/j.joms.2012.02.022

Keywords: alveolar bone; Anesthetics, Inhalation; Anesthetics, Intravenous; animal experiment; animal model; artificial ventilation; blood flow; Blood Pressure; bone blood flow; Bone Marrow; carotid artery flow; Carotid Artery, Common; continuous infusion; controlled study; Dexmedetomidine; diastolic blood pressure; Dose-Response Relationship, Drug; drug activity; general anesthesia; Heart Rate; hemodynamics; Hypnotics and Sedatives; Laser-Doppler Flowmetry; mandible; Mandible; masseter muscle; Masseter Muscle; mean arterial pressure; Methyl Ethers; Mouth; Mouth Mucosa; muscle blood flow; Propofol; Pulmonary Alveoli; rabbits; Regional Blood Flow; Respiration, Artificial; sevoflurane; systolic blood pressure; tongue; Tongue; Tracheotomy; Vascular Resistance

Schnellbacher, R. W., Carpenter, J. W., Mason, D. E., KuKanich, B., Beaufrère, H., & Boysen, C. (2013). Effects of lidocaine administration via continuous rate infusion on the minimum alveolar concentration of isoflurane in New Zealand White rabbits (Oryctolagus cuniculus). *American Journal of Veterinary Research*, *74*(11), 1377–1384. https://doi.org/10.2460/ajvr.74.11.1377

Keywords: Anesthetics, Inhalation/administration & dosage/pharmacokinetics; Anesthetics, Local/administration & dosage/blood/pharmacologyBalanced Anesthesia/methods/veterinary; Blood Pressure/drug effects; Chromatography, Liquid; Cross-Over Studies; Dose-Response Relationship, Drug; Heart Rate/drug effects; Infusions, Intravenous/veterinary; Isoflurane/administration & dosage/pharmacokinetics; Lidocaine/administration & dosage/blood/pharmacology; Mass Spectrometry; Rabbits

Schoemaker, N., & Zeeland, Y. van. (2017). *Use of a supraglottic airway device during anesthesia in rabbits.* 304. CAB Abstracts. https://search.ebscohost.com/login.aspx?direct=true&db=lah&AN=20183390451&site=ehost-live

Keywords: anesthesia; anesthetics; LL070; LL882; mechanism of drug action; methods; rabbits; Techniques and Methodology; Veterinary Pharmacology and Anaesthesiology; ZZ900

Simsek, T., Erbas, M., Buyuk, B., Pala, C., Sahin, H., & Altinisik, B. (2018). Prevention of rocuronium induced mast cell activation with prophylactic oleuropein rich diet in anesthetized rabbits. *Acta Cirurgica Brasileira*, *33*(11), 954–963. Scopus. https://doi.org/10.1590/s0102-865020180110000002

Keywords: General anaesthesia; Intraocular pressure; Oleuropein; rabbits; Rocuronium

Tearney, C. C., Barter, L. S., & Pypendop, B. H. (2015). Cardiovascular effects of equipotent doses of isoflurane alone and isoflurane plus fentanyl in New Zealand White rabbits (Oryctolagus cuniculus). *American Journal of Veterinary Research*, *76*(7), 591–598. https://doi.org/10.2460/ajvr.76.7.591

Keywords: Anesthetics, Inhalation/administration & dosage/pharmacology; Balanced Anesthesia; Blood Pressure/drug effects; Cardiac Output/drug effects; Fentanyl/administration & dosage/blood/pharmacology; Heart Rate/drug effects; Isoflurane/administration & dosage/pharmacology; Rabbits; Vascular Resistance/drug effects

Toman, H., Erbas, M., Sahin, H., Kiraz, H. A., Uzun, M., & Ovali, M. A. (2015). Comparison of the effects of various airway devices on hemodynamic response and QTc interval in rabbits under general anesthesia. *JOURNAL OF CLINICAL MONITORING AND COMPUTING*, *29*(6), 727–732. https://doi.org/10.1007/s10877-015-9659-x

Keywords: adrenergic stimulation; Anesthesia, General; Anesthesiology; animal experiment; animal model; Blood pressure; Cobra PLA; comparative study; devices; electrocardiogram; electrocardiography; Electrocardiography; Endotracheal intubation; equipment design; Equipment Design; general anesthesia; heart muscle ischemia; Heart Rate; hemodynamic parameters; Hemodynamic response; Hemodynamics; Intubation, Intratracheal; Laryngeal mask airways; Laryngeal Masks; mean arterial pressure; Models, Animal; QTc interval; rabbits; Respiratory therapy; supraglottic airway device; V-gel Rabbit

Tutunaru, A. C., Leau, F., Sonea, A., & Sandersen, C. (2013). The use of medetomidine and buprenorphine for premedication, ketamine for induction and isoflurane to maintain general anesthesia in rabbits. Case studies. *Scientific Works. Series C. Veterinary Medicine*, *59*(1), 81–84. Global Health.

Keywords: Animal and in-vitro Models for Pharmaceuticals; Animal Models of Human Diseases; Animal Surgery and Non-drug Therapy; Laboratory Animal Science; Leporidae; LL040; LL860; LL882; LL884; rabbits; Veterinary Pharmacology and Anaesthesiology; VV400; VV450

Uccello, O., Sanchez, A., Valverde, A., & Beaufrere, H. (2020). Cardiovascular effects of increasing dosages of norepinephrine in healthy isoflurane-anesthetized New Zealand White rabbits. *VETERINARY ANAESTHESIA AND ANALGESIA*, *47*(6), 781–788. https://doi.org/10.1016/j.vaa.2020.07.001

Keywords: adrenergic receptor stimulating agent; Anesthesia; anesthesia induction; Anesthesia/veterinary; animal experiment; animal model; blood; blood carbon dioxide tension; blood oxygen tension; blood pressure; buprenorphine; Carbon Monoxide; Carbon Monoxide/blood; cardiovascular effect; Cardiovascular System; Cardiovascular System/drug effects; continuous infusion; controlled study; diastolic blood pressure; dose response; Dose-Response Relationship, Drug; drug dose increase; drug effect; drug megadose; drug withdrawal; electrolyte; experimental study; flumazenil; heart output; heart rate; hemoglobin; hypotension; Hypotension; Hypotension/drug therapy; intermittent positive pressure ventilation; Isoflurane;

lactic acid; Leporidae; lithium; low drug dose; mean arterial pressure; midazolam; noradrenalin; Norepinephrine; Norepinephrine/administration & dosage/pharmacology/therapeutic use; peak inspiratory pressure; propofol; prospective study; pulse oximetry; rabbits; Sympathomimetics; Sympathomimetics/administration & dosage/pharmacology/therapeutic use; systolic blood pressure; vetergesic; veterinary medicine

Uzun, M., Kiraz, H. A., Ovali, M. A., Sahin, H., Erbas, M., & Toman, H. (2015). The investigation of airway management capacity of v-gel and cobra-PLA in anaesthetised rabbits. *Acta Cirurgica Brasileira*, *30*(1), 80–86. Scopus. https://doi.org/10.1590/S0102-86502015001000011

Keywords: adverse effects; Ambu device; anesthesia; Anesthesia, Endotracheal/veterinary; Anesthesia, Intratrachealanimal experimentarterial blood; arterial pH; artificial ventilation; assisted ventilation; Blood Gas Analysis; carbon dioxide tension; CobraPLA; comparative study; controlled study; cyanosis; devices; end tidal carbon dioxide tension; endotracheal intubation; equipment design; Equipment Design; evaluation study; Hydrogen-Ion Concentration; Intratracheal; intubation; Intubation; Intubation, Intratracheal; Intubation, Intratracheal/adverse effects/instrumentation/veterinary; Laryngeal Masks; laryngoscopy; operation duration; oxygen tension; oxygenation; pH; postoperative complication; rabbits; Reference Values; Reproducibility of Results; respiration control; Respiration, Artificial; Respiration, Artificial/adverse effects/instrumentation/veterinary; supraglottic airway device; Time Factors; veterinary

Weiland, L. C., Kluge, K., Kutter, A. P. N., & Kronen, P. W. (2017). Clinical evaluation of intranasal medetomidine-ketamine and medetomidine-S(+)-ketamine for induction of anaesthesia in rabbits in two centres with two different administration techniques. *VETERINARY ANAESTHESIA AND ANALGESIA*, *44*(1), 98–105. https://doi.org/10.1111/vaa.12408

Keywords: Administration, Intranasal; Administration, Intranasal/methods; Adrenergic alpha-2 Receptor Agonists; Adrenergic alpha-2 Receptor Agonists/administration & dosage/adverse effects; alpha 2 adrenergic receptor stimulating agent; Anesthesia; Anesthesia/methods/veterinary; anesthetic agent; Anesthetics, Combined; Anesthetics, Combined/administration & dosage/adverse effects; Anesthetics, Inhalation; Anesthetics, Inhalation/administration & dosage/adverse effects; Buprenorphine; Buprenorphine/administration & dosage; clinical trial; comparative study; controlled study; endotracheal intubation; Heart Rate; inhalation anesthetic agent; intranasal; intranasal drug administration; Isoflurane; ketamine; Ketamine/administration & dosage/adverse effects; Leporidae; Medetomidine; Medetomidine/administration & dosage/adverse effects; multicenter study; Narcotic Antagonists; Narcotic Antagonists/administration & dosage; Patient Positioning; Patient Positioning/adverse effects/veterinary; Prospective Studies; rabbits; randomized controlled trial; S(+)-ketamine; veterinary

Wenger, S., Muellhaupt, D., Ohlerth, S., Prasse, S., Klein, K., Valente, B. da S., & Mosing, M. (2017). Experimental evaluation of four airway devices in anaesthetized New Zealand White rabbits. *VETERINARY ANAESTHESIA AND ANALGESIA*, *44*(3), 529–537. https://doi.org/10.1016/j.vaa.2016.05.009

Keywords: Anesthesia; Anesthesia/veterinary; apnea; artificial ventilation; breathing rate; capnograph; comparative study; computer assisted tomography; controlled study; Cross-Over Studies; cyanosis; devices; endotracheal intubation; evaluation study; facemask; Hypnotics and Sedatives/administration & dosage; intravenous catheter; Intubation, Intratracheal/instrumentation/veterinary; Laryngeal Masks; larynx; Leporidae; lidocaine; maximal inspiratory pressure; New Zealand White (rabbit); procedures; Propofol/administration & dosage; Prospective Studies; pulse oximetry; rabbits; Random Allocation; randomization; randomized controlled trial; Respiration, Artificial; rocuronium; spirometer; supraglottic airway device; Tidal Volume; upper respiratory tract obstruction; v-gel; veterinary

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77 citations

Albinana-Cunningham, J. N., Ripalda-Cemborain, P., Labiano, T., Echeveste, J. I., Granero-Molto, F., & Alfonso-Olmos, M. (2018). Mechanical barriers and transforming growth factor beta inhibitor on epidural fibrosis in a rabbit laminectomy model. *JOURNAL OF ORTHOPAEDIC SURGERY AND RESEARCH*, *13*. https://doi.org/10.1186/s13018-018-0781-6

Keywords: adhesion barrier gelantagonists and inhibitors; Biocompatible Materials; Biomaterials; Cicatrix; Collagen; comparative study; Disease Models, Animal; Dura Mater; Epidural fibrosis; Epidural Space; evaluation study; Fibrosis; Laminectomy; Leporidae; metabolism; Organic Chemicals; organic compound; pathology; Peptide Fragments; Rabbits; scar; TGF-beta1 type III receptor (730-743), human; TGF-β; Tissue Adhesions

Al-Mahalawy, H., Abuohashish, H., Chathoth, S., Al-Masoud, N., & Al-Jandan, B. (2018). Articaine Versus Lidocaine Concentration in the Palatal Tissues After Supraperiosteal Buccal Infiltration Anesthesia. *Journal of Oral and Maxillofacial Surgery : Official Journal of the American Association of Oral and Maxillofacial Surgeons*, *76*(2), 315.e1-315.e7. https://doi.org/10.1016/j.joms.2017.10.001

Keywords: Administration, Buccal; Anesthesia, Local/methods; Anesthetics, Local/administration & dosage/pharmacokinetics; Carticaine/administration & dosage/pharmacokinetics; Chromatography, High Pressure Liquid; Lidocaine/administration & dosage/pharmacokinetics; Palate, Hard/metabolism; Rabbits

Antonczyk, A., Liszka, B., Skrzypczak, P., & Kielbowicz, Z. (2019). Comparison of analgesia provided by lidocaine or morphine delivered epidurally in rabbits undergoing hindlimb orthopedic surgery. *POLISH JOURNAL OF VETERINARY SCIENCES*, *22*(1), 31–35. https://doi.org/10.24425/pjvs.2018.125604

Keywords: Analgesics, Opioid; Analgesics, Opioid/administration & dosage/pharmacology; Anesthesia; Anesthesia/veterinary; Anesthetics, Local; Anesthetics, Local/administration & dosage/pharmacologyblood pressure; Blood Pressure; Epidural anesthesia; epidural drug administration; Hindlimb/surgery; Injections, Epidural; Intraoperative pain; ketamine; Ketamine/administration & dosage/pharmacology; Leporidae; Lidocaine; Lidocaine/administration & dosage/pharmacology; local anesthetic agent; Medetomidine; Medetomidine/administration & dosage/pharmacology; Morphine; Morphine/administration & dosage/pharmacology; narcotic analgesic agent; Pain, Postoperative; Pain, Postoperative/prevention & control/veterinary; Rabbits; surgery; veterinary medicine

Bavli, Y., Rabie, M., Fellig, Y., Nevo, Y., & Barenholz, Y. (2021). Liposomal Bupivacaine (Bupigel) Demonstrates Minimal Local Nerve Toxicity in a Rabbit Functional Model. *PHARMACEUTICS*, *13*(2). https://doi.org/10.3390/pharmaceutics13020185

Keywords; animal tissue; bupigel; bupivacaine; controlled study; drug formulation; electromyography; granuloma; hindlimb; histopathology; hydrogel; lidocaine; liposomal delivery; Liposomes; Long acting local anesthetic; motor nerve; muscle action potential; Nerve conduction study; nerve conduction velocity test; nerve potential; nervous system electrophysiology; Neurotoxicity; New Zealand White (NZW) rabbits; New Zealand White (rabbit); perineural drug administration; retention time; sciatic nerve; sensory nerve; sodium chloride; sural nerve; validity

Bottegaro, N. B., Kos, J., Pirkic, B., Smolec, O., Grabarevic, Z., Hohsteter, M., Selanec, J., & Vrbanac, Z. (2013). Reduction of epidural fibrosis after laminectomy in rabbits by omental free graft. *VETERINARNI MEDICINA*, *58*(1), 25–31. https://doi.org/10.17221/6653-VETMED

Keywords: Animal Models of Human Diseases; Animal Surgery and Non-drug Therapylaminectomy; Leporidae; LL860; LL884; Non-Communicable Diseases and Injuries of Animals; rabbits; surgical techniques; Techniques and Methodology; VV400; ZZ900

Cai, X., Liu, Y., Hu, Y., Liu, X., Jiang, H., Yang, S., Shao, Z., Xia, Y., & Xiong, L. (2018). ROS-mediated lysosomal membrane permeabilization is involved in bupivacaine-induced death of rabbit intervertebral disc cells. *REDOX BIOLOGY*, *18*, 65–76. https://doi.org/10.1016/j.redox.2018.06.010

Keywords: acridine orange; Anesthetics, Local; animal cellannulus fibrosus; Bupivacaine; cathepsin D; cell culture; Cell Death; cell membrane permeability; cell permeabilization; Cell Survival; cell swelling; cell viability; Cells, Cultured; chemically induced; chondrocyte; controlled study; cytolysis; cytosol; cytotoxicity; drug effect; immunofluorescence; immunohistochemistry; in vitro study; inhibition kinetics; Intervertebral Disc; intervertebral disc cell; intervertebral disk; Leporidae; lipocortin 5; LMP; local anesthetic agent; lysosome membrane; Lysosomes; membrane rupture; metabolism; n (3 propylcarbamoyloxirane 2 carbonyl)isoleucylproline; necroptosis; necrosis; Necrosis; nucleus pulposus; pathology; pepstatin; Permeability; pharmacological blocking; propidium iodide; Rabbits; reactive oxygen metabolite; Reactive Oxygen Species; ROS; staining; transmission electron microscopy

Cai, X.-Y., Xia, Y., Yang, S.-H., Liu, X.-Z., Shao, Z.-W., Liu, Y.-L., Yang, W., & Xiong, L.-M. (2015). Ropivacaine- and bupivacaine-induced death of rabbit annulus fibrosus cells in vitro: Involvement of the mitochondrial apoptotic pathway. *OSTEOARTHRITIS AND CARTILAGE*, *23*(10), 1763–1775. https://doi.org/10.1016/j.joca.2015.05.013

Keywords: acetylcysteine; Amides; Anesthetics, Local; animal cell; animal experimentannulus fibrosus; apoptosis; Apoptosis; Blotting, Western; Bupivacaine; cartilage cell; caspase 3; Caspase 3; caspase 9; Caspase 9; cell assay; cell counting kit 8 assay; cell culture; Cell Death; cell nucleus; cell structure; Cells, Cultured; Chondrocytes; concentration response; controlled study; cytology; cytotoxicity; dichlorodihydrofluorescein diacetate; Down-Regulation; drug effects; drug mechanism; enzyme activation; enzyme activity; flow cytometry; genetics; hoe 33342; in vitro study; In Vitro Techniques; Intervertebral Disc; intervertebral disk; intracellular signaling; Japanese White (rabbit); lipocortin 5; local anesthetic agent; Membrane Potential, Mitochondrial; messenger RNA; metabolism; Mitochondria; mitochondrial membrane potential; mitochondrion; oxidative stress; protein Bax; protein bcl 2; protein expression; Proto-Oncogene Proteins c-bcl-2; rabbits; reactive oxygen metabolite; Reactive Oxygen Species; Real-Time Polymerase Chain Reaction; Ropivacaine; sodium chloride; staining; upregulation; Western blotting

Cai, X.-Y., Xiong, L.-M., Yang, S.-H., Shao, Z.-W., Xie, M., Gao, F., & Ding, F. (2014). Comparison of toxicity effects of ropivacaine, bupivacaine, and lidocaine on rabbit intervertebral disc cells in vitro. *SPINE JOURNAL*, *14*(3), 483–490. https://doi.org/10.1016/j.spinee.2013.06.041

Keywords: Amides; Anesthetics, Local; Apoptosis; Bupivacaine; cartilage cell; cell culture; Cell Death; Cell Survival; Cells, Cultured; Chondrocytes; comparative study; cytology; dose response; Dose-Response Relationship, Drug; drug effects; in vitro study; In Vitro Techniques; Intervertebral Disc; Lidocaine; local anesthetic agent; Models, Animal; Necrosis; rabbits; Ropivacaine; Time Factors

Celebi, N., Muglali, M., Aksoy, A., Yarim, G., Yarim, M., & Guvenc, D. (2013). Comparison of lidocaine metabolism for different anesthesia techniques in rabbits with liver disease. *ORAL SURGERY*

ORAL MEDICINE ORAL PATHOLOGY ORAL RADIOLOGY, *116*(1), E23–E26. https://doi.org/10.1016/j.oooo.2011.11.026

Keywords: Analysis of Variance; Anesthesia, Local; Anesthesia, Local/methods; Anesthetics, Local/adverse effects/blood; blood; chemically induced disorder; comparative study; End Stage Liver Disease/chemically induced/complications; Lidocaine; Lidocaine/adverse effects/blood; Mandible; methodology; Rabbits

Cho, J., Lee, J. W., Lee, E., Kang, Y., Cho, H. R., Kim, D. Y., Ho, M. J., Kang, M. J., & Choi, Y. S. (2019). Quantitative assessment of steroid amount in the tissue after epidural steroid injection: A new rabbit model. *KOREAN JOURNAL OF PAIN*, *32*(4), 264–270. https://doi.org/10.3344/kjp.2019.32.4.264

Keywords; animal tissue; controlled study; drug retention; Fluoroscopy; Injections Epidural; Lumbar Vertebrae; Models Animal; New Zealand White (rabbit); Pain; quantitative analysis; rabbit model; Rabbits; Spine; Steroids

Chou, Y.-C., Cheng, Y.-S., Hsu, Y.-H., Yu, Y.-H., & Liu, S.-J. (2016). Biodegradable nanofiber-membrane for sustainable release of lidocaine at the femoral fracture site as a periosteal block: In vitro and in vivo studies in a rabbit model. *Colloids and Surfaces. B, Biointerfaces*, *140*, 332–341. https://doi.org/10.1016/j.colsurfb.2016.01.011

Keywords: Absorbable Implants; Anesthetics, local/chemistry/pharmacokinetics/pharmacology; Biodegradable nanofiber; Body Weight/drug effects; Delayed-Action Preparations/chemistry/pharmacokinetics/pharmacology; Drinking/drug effects; Drug Liberation; Eating/drug effects; Femoral Fractures/physiopathology/surgery; Lidocaine/chemistry/pharmacokinetics/pharmacology; Membranes, Artificial; Microscopy, Electron, Scanning; Nanofibers/chemistry/ultrastructure; Nerve Block/methods; Pain, Postoperative/prevention & control; Periosteal block; Periosteum/innervation; Rabbits; Spectroscopy, Fourier Transform Infrared; Sustainable release of lidocaine; Time Factors; Treatment Outcome

Chun-jing, H., Shan, O., Guo-dong, L., Hao-xiong, N., Yi-ran, L., & Ya-ping, F. (2013). Effect of cervical sympathetic block on cerebral vasospasm after subarachnoid hemorrhage in rabbits. *Acta Cirurgica Brasileira*, *28*(2), 89–93. https://doi.org/10.1590/s0102-86502013000200001

Keywords: Autonomic Nerve Block; Anesthetics, Local/administration & dosage; Basilar Artery/diagnostic imaging; Bupivacaine/administration & dosage; Disease Models, Animal; Neurologic Examination; Nitric Oxide Synthase/blood/cerebrospinal fluid; Nitric Oxide/blood/cerebrospinal fluid; Rabbits; Radiography; Random Allocation; Subarachnoid Hemorrhage/complications; Vasospasm, Intracranial/etiology/therapy

d'Ovidio, D., & Adami, C. (2021). Neuropraxia after infraorbital nerve block in a pet rabbit (Oryctolagus cuniculus). *VETERINARY ANAESTHESIA AND ANALGESIA*, *48*(5), 817–819. https://doi.org/10.1016/j.vaa.2021.06.009

Keywords: anesthetic recovery; animal experiment; arterial pressure; ataxic gait; atipamezole; bupivacaine; buprenorphine; dermatome; dexmedetomidine; eardrum; electrocardiography; enrofloxacin; extubation; global positioning system; heart rate; infraorbital nerve; intraocular pressure; isoflurane; ketamine; lidocaine; maxillary nerve; medetomidine; midazolam; mortality rate; nerve block; Oryctolagus cuniculus; pain intensity; pulse oximetry; retrospective study; tiletamine; tooth extraction

Da Fonseca, A. F. B., Scheffer, J. P., Coelho, B. P., Aiello, G., Guimaraes, A. G., Gama, C. R. B., Vescovini, V., Cabral, P. G. A., & Oliveira, A. L. A. (2016). Technique of spinal cord compression

induced by inflation of epidural balloon catheter in rabbits (Oryctologus cuniculus): Efficient and easy to use model. *ANAIS DA ACADEMIA BRASILEIRA DE CIENCIAS*, *88*(3), 1511–1517. https://doi.org/10.1590/0001-3765201620160060

Keywords: Animals; Catheters; Disease Models, Animal; Epidural Space; Rabbits; Reproducibility of Results; Spinal Cord Compression/etiology

de Miguel Garcia, C., Radkey, D. I., Hetzel, S., & Doss, G. (2020). Injection techniques for auricular nerve blocks in the rabbit cadaver. *Veterinary Anaesthesia and Analgesia*. Scopus. https://doi.org/10.1016/j.vaa.2019.11.006

Keywords: anatomic landmark; animal experiment; auricle; auricular nerves; auriculotemporal; breed; Cadaver; controlled study; dissection; Ear Auricle; Ear Auricle/innervation; greater auricular; incidence; injection; Injections/methods/veterinary; innervation; Leporidae; mandibular nerve; Nerve Block; Nerve Block/methods/veterinary; procedures; prospective study; rabbits; regional anesthesia; veterinary medicine

Emrarian, A., & Sarchahi, A. A. (2020). Effect of four local anesthetics (tetracaine, bupivacaine, lidocaine and proparacaine) on intraocular pressure in rabbits- Comparison of an applanation and a rebound tonometer. *Iranian Journal of Veterinary Science and Technology*, *12*(1), 47–54. Scopus. https://doi.org/10.22067/veterinary.v12i1.82719

Keywords: animal experiment; Bupivacaine; controlled study; Intraocular pressure; Leporidae; Lidocaine; lignodig; Proparacaine; proxymetacaine; Tetracaine; LL860; LL882; Non-Communicable Diseases and Injuries of Animals; rabbits; Veterinary Pharmacology and Anaesthesiology

Ethington, J., Goldmeier, D., & Gaynes, B. I. (2017). Exponential Decay Metrics of Topical Tetracaine Hydrochloride Administration Describe Corneal Anesthesia Properties Mechanistically. *Cornea*, *36*(3), 363–366. https://doi.org/10.1097/ICO.0000000000001125

Keywords: Anesthesia, Local; Administration, Topical; Anesthetics, Local/administration & dosage/pharmacokinetics; Biological Availability; Cornea/drug effects/metabolism; Models, Animal; Ophthalmic Solutions; Rabbits; Tetracaine/administration & dosage/pharmacokinetics

Felipe, G. da C., Henrique, F. V., do Rego, R. O., Alves, A. P., Silva de Oliveira, K. D., Firmino, M. de O., Gomes de Medeiros, L. K., Silva, G. de A., Batista, L. F., Medeiros Dantas, A. F., de Souza, B. B., & da Nobrega Neto, P. I. (2017). Systemic and neurotoxic effects of epidural meloxicam in rabbits. *CIENCIA RURAL*, *47*(5). https://doi.org/10.1590/0103-8478cr20160177

Keywords: Anti-inflammatory; Leporids; Neurotoxicity; Spinal cord

Fonseca, C., Server, A., Esteves, M., Barastegui, D., Rosal, M., Fontecha, C. G., & Soldado, F. (2015). An ultrasound-guided technique for axillary brachial plexus nerve block in rabbits. *LAB ANIMAL*, *44*(5), 179–184. https://doi.org/10.1038/laban.732

Keywords: Amides; analgesia; Anesthetics, Local; brachial plexus anesthesia; Brachial Plexus Block; Brachial Plexus Block/methods/veterinary; Brachial Plexus/diagnostic imaging; diagnostic imaging; echography; local anesthetic agent; Pain Management; procedures; rabbits; Ropivacaine; Ultrasonography; veterinary; administration routes; Animal Surgery and Non-drug Therapy; LL822; LL884; nerves; Protozoan, Helminth, Mollusc and Arthropod Parasites of Animals

Friel, N. A., Wang, V. M., Slabaugh, M. A., Wang, F., Chubinskaya, S., & Cole, B. J. (2013). Rotator cuff healing after continuous subacromial bupivacaine infusion: An in vivo rabbit study. *Journal of Shoulder and Elbow Surgery*, *22*(4), 489–499. MEDLINE. https://doi.org/10.1016/j.jse.2012.04.014

Keywords: Anesthetics, Local/pharmacology; Bupivacaine/pharmacology; Muscle, Skeletal/drug effects; Muscle, Skeletal/surgery; Rabbits; Rotator Cuff/drug effects; Rotator Cuff/pathology; Rotator Cuff/surgery; Wound Healing/drug effects

Fu, D., Liu, H., Li, S., Chen, L., & Yao, J. (2017). Antioxidative and Antiapoptotic Effects of Delta-Opioid Peptide [D-Ala(2), D-Leu(5)] Enkephalin on Spinal Cord Ischemia-Reperfusion Injury in Rabbits. *FRONTIERS IN NEUROSCIENCE*, *11*. https://doi.org/10.3389/fnins.2017.00603

Keywords; animal model; animal tissue; antiapoptotic effect; antioxidant activity; Apoptosis; blood sampling; caspase 3; controlled study; DADLE; drug effect; enkephalin[2 dextro alanine 5 dextro leucine]; enzyme blood level; enzyme inhibition; glutathione peroxidase blood level; immunohistochemistry; Ischemia-reperfusion injury; lumbar spinal cord; malonaldehyde; nervous tissue; neuroprotection; New Zealand White (rabbit); nitric oxide; Oxidative stress; protein expression; protein p53; Rabbit models; randomized controlled trial; sham procedure; Spinal cord; spinal cord injury; spinal cord ischemia; superoxide dismutase; superoxide dismutase blood level

Garcia, C. de M., Doss, G., Travis, M. L., Hetzel, S., & Ferreira, T. H. (2020). Efficacy of greater auricular and auriculotemporal nerve blocks performed in rabbits. *VETERINARY ANAESTHESIA AND ANALGESIA*, *47*(4), 567–573. https://doi.org/10.1016/j.vaa.2020.02.005

Keywords: alfaxalone; analgesia; Anesthesia, Conduction/veterinary; Anesthetics, Local; animal experiment; animal model; arterial oxygen saturation; auricle; auricular nerve block; auriculotemporal nerve block; body weight; breathing rate; Bupivacaine; butorphanol; cervical vertebra; chlorhexidine; controlled study; Cross-Over Studies; dog; drug effect; drug substitution; drug withdrawal; ear surgery; eardrum; fatal plus; fecal output; feces analysis; flumazenil; food intake; Frey syndrome; general anesthesia; greater auricular; hay; heart rate; intraocular pressure; isoflurane; Leporidae; local anesthetic agent; Mandibular Nerve/drug effects; meloxicam; midazolam; Nerve Block; Nerve Block/methods/veterinary; nociception; operation duration; pentobarbital; pilot study; Prospective Studies; rabbits; randomized controlled trial; recumbency; regional anesthesia; rhythm; sensorcaine mpf; Time Factors; veterinary medicine

Gu, Y., Wang, L., Wang, X., Tang, Y., Cao, F., & Fang, Y. (2012). Assessment of ventricular electrophysiological characteristics at periinfarct zone of postmyocardial infarction in rabbits following stellate ganglion block. *Journal of Cardiovascular Electrophysiology*, *23 Suppl 1*, S29-35. https://doi.org/10.1111/j.1540-8167.2012.02437.x

Keywords: Autonomic Nerve Block/methods; Electrophysiologic Techniques, Cardiac; Ventricular Function; Action Potentials; Anesthetics, Local; Arrhythmias, Cardiac/etiology/physiopathology/prevention & control; Bupivacaine; Disease Models, Animal; Endocardium/pathology/physiopathology; Heart Ventricles/innervation/pathology/physiopathology; Myocardial Infarction/complications/pathology/physiopathology; Myocardium/pathology; Pericardium/pathology/physiopathology; Rabbits; Refractory Period, Electrophysiological; Stellate Ganglion/physiopathology; Time Factors

Gusak, V., Turkovic, V., Nesek-Adam, V., Lerotic, I., Popovic, M., Brajenovic, N., Karaconji, I. B., & Vnuk, D. (2013). Lidocaine serum concentration after epidural administration in combination with morphine and fentanyl in rabbit—A preliminary study. *RESEARCH IN VETERINARY SCIENCE*, *94*(3), 651–655. https://doi.org/10.1016/j.rvsc.2012.10.001

Keywords: Anesthesia, Epidural; Anesthesia, Epidural/methods/veterinary; Anesthetics, Combined; Anesthetics, Combined/administration & dosage/pharmacology; animal experiment; arterial gas; blood sampling; Body Temperature; Body Temperature/drug effects; Concentration; controlled study; drug absorption; drug blood level; Drug Interactions; epidural space; Fentanyl; Fentanyl/administration & dosage/pharmacology; general anesthesia; Heart Rate; Heart Rate/drug effects; Injections, Epidural; Lidocaine; Lidocaine/administration & dosage/blood/pharmacokinetics; lidokain; morfin klorid; Morphine; Morphine/administration & dosage/pharmacology; Narcotics; Narcotics/administration & dosage/pharmacology; Oryctolagus cuniculus; rabbits; Serum; unclassified drug; vasodilatation; adjuvants; analgesia

Hallab, N. J., Bao, Q.-B., & Brown, T. (2013). Assessment of epidural versus intradiscal biocompatibility of PEEK implant debris: An in vivo rabbit model. *EUROPEAN SPINE JOURNAL*, *22*(12), 2740–2751. https://doi.org/10.1007/s00586-013-2904-4

Keywords: animal cell; animal experiment; animal tissue; Biocompatibility; controlled study; Cytokines; Disc arthroplasty; dura mater; Epidural Space; experimental rabbit; Fibrosis; Foreign Bodies; histopathology; Immune response; immunocompetent cell; immunohistochemistry; in vivo study; Inflammation; inflammatory cell; Interleukin-1beta; Interleukin-6; intermethod comparison; Intervertebral Disc; joint prosthesis; Ketones; Materials Testing; Models, Animal; PEEK; polyetheretherketone; Polyethylene Glycols; Prostheses and Implants; quantitative analysis; Rabbits; simulator; Spine; Tumor Necrosis Factor-alpha; Wear particles

Hopker, L. M., Senff de Moraes, M. A., Nitsch, R., Pasqual, G. W., Cavagnari, P., Kusma, S. Z., Moreira, L., Zanoteli, E., & Allemann, N. (2020). Bupivacaine Injection in the Extra Ocular Muscle of Rabbits: Analysis of Global and Orbital Layers. *CURRENT EYE RESEARCH*, *45*(8), 950–954. https://doi.org/10.1080/02713683.2019.1700531

Keywords: Anesthetics, Local; animal experiment; animal tissue; Bupivacaine; controlled study; drug effect; extraocular muscle; Immunohistochemistry; Injections, Intramuscular; intramuscular drug administration; Leporidae; local anesthetic agent; metabolism; microscopy; Muscle Fibers, Skeletal; myosin antibody; Myosin Type I; New Zealand White (rabbit); Oculomotor Muscles; Orbit; pathology; rabbits; skeletal muscle

Inoue, S., Mori, A., Shimizu, H., Yoshitake, A., Tashiro, R., Kabei, N., & Yozu, R. (2013). Combined use of an epidural cooling catheter and systemic moderate hypothermia enhances spinal cord protection against ischemic injury in rabbits. *JOURNAL OF THORACIC AND CARDIOVASCULAR SURGERY*, *146*(3), 696–701. https://doi.org/10.1016/j.jtcvs.2012.11.040

Keywords: animal experiment; animal model; aorta occlusion; Aorta, Abdominal; body temperature; Body Temperature Regulation; Catheters; controlled study; Disease Models, Animal; epidural catheter; Epidural Space; Equipment Design; Fogarty catheter; hypothermia; Hypothermia, Induced; Ligation; metabolic stress; Motor Activity; Paraplegia; rabbits; randomized controlled trial; Recovery of Function; Reperfusion Injury; Spinal Cord; spinal cord injury; Spinal Cord Ischemia; TAA; thoracoabdominal aortic aneurysm; Time Factors

Javdani, M., & Nikousefat, Z. (2012). Clinical effects of eugenol and lidocaine as anesthetic on histopathology and skin wound healing in rabbit. *Research Opinions in Animal and Veterinary Sciences*, *2*(2), 141–144. CAB Abstracts.

Keywords: LL860; LL882; Non-Communicable Diseases and Injuries of Animals; rabbits; Veterinary Pharmacology and Anaesthesiology

Kariya, N., Cosson, C., & Mazoit, J.-X. (2012). Comparative effect of lidocaine, bupivacaine and RAC 109 on myocardial conduction and contractility in the rabbit. *EUROPEAN JOURNAL OF PHARMACOLOGY*, *691*(1–3), 110–117. https://doi.org/10.1016/j.ejphar.2012.05.034

Keywords: 1' [3 (diethylamino)propyl] 3,4 dihydrospiro[naphthalene 1(2h),3' pyrrolidine] 2',5' dione; Anesthetics, Local; animal cell; animal experiment; animal tissue; binding site; Bupivacaine; Cardiotoxicity; cell isolation; cell size; concentration response; Contractility; controlled study; dose response; drug potency; drug receptor binding; Enantioselectivity; Heart Conduction System; heart muscle cell; heart muscle conduction disturbance; heart muscle contractility; heart muscle relaxation; heart perfusion; heart ventricle contractility; heart ventricle pressure; hydrophobicity; ionization; isolated heart; Lidocaine; Myocardial Contraction; myocardial disease; Myocytes, Cardiac; Naphthalenes; pharmacodynamics; Pyrrolidinones; QRS complex; rabbits; Ryanodine; ryanodine receptor; Sarcoplasmic Reticulum; stereochemistry; velocity; cardiomyocytes; local anesthetics; models; toxicity

Kasahara, M., Terakawa, Y., Ichinohe, T., & Kaneko, Y. (2012). Unilateral stellate ganglion block produces bidirectional changes in tissue oxygen tension of the mental nerve in rabbits. *Journal of Oral and Maxillofacial Surgery : Official Journal of the American Association of Oral and Maxillofacial Surgeons*, *70*(1), 45–48. https://doi.org/10.1016/j.joms.2011.06.217

Keywords: Stellate Ganglion; Anesthetics, Local/administration & dosageBlood Pressure/drug effects; Carotid Artery, Common/drug effects; Chin/innervation; Heart Rate/drug effects; Injections, Spinal/methods; Lidocaine/administration & dosage; Mandibular Nerve/drug effects; Nerve Block/methods; Oxygen Consumption/drug effects; Rabbits; Regional Blood Flow/drug effects; Tongue/blood supply

Kim, C., Barbut, D., Heinemann, M. H., Pasternak, G., & Rosenblatt, M. I. (2014). Synthetic Neurotensin Analogues Are Nontoxic Analgesics for the Rabbit Cornea. *INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE*, *55*(6), 3586–3593. https://doi.org/10.1167/iovs.13-13050

Keywords: analgesic activity; Analgesics; animal cell; animal experiment; animal tissue; Blinking; Blotting, Western; cell migration; cell motility; Cell Movement; Cells, Cultured; Chromatography, High Pressure Liquid; controlled study; Cornea; Corneal wound healing; cytotoxicity; cytotoxicity assay; Disease Models, Animal; dose response; Eye Injuries; gene expression; Gene Expression Regulation; high performance liquid chromatography; histology; Immunohistochemistry; Neurotensin; neurotensin derivative; neurotensin receptor; NT71 peptide; NT72 peptide; ophthalmic esthesiometer; Ophthalmic Solutions; Peptides; photorefractive keratectomy; polyacrylamide gel electrophoresis; polymerase chain reaction; proxymetacaine; rabbits; Receptors, Neurotensin; RNA, Messenger; slit lamp; sodium channel blocking agent; tetracaine; Topical analgesia; Trigeminal Ganglion; unclassified drug; Western blotting; Wound Healing

Kluge, K., Larenza Menzies, M. P., Kloeppel, H., Pearce, S. G., Bettschart-Wolfensberger, R., & Kutter, A. P. N. (2017). Femoral and sciatic nerve blockades and incision site infiltration in rabbits undergoing stifle joint arthrotomy. *LABORATORY ANIMALS*, *51*(1), 54–64. https://doi.org/10.1177/0023677215622734

Keywords: analgesia; Anesthetics, Local; Bupivacaine; Lidocaine; rabbits; anesthesia level; animal experiment; animal model; arthrotomy; buprenorphine; carprofen; controlled study; drug effects; experimental rabbit; femoral nerve; Femoral Nerve; fentanyl; heart rate; Intraoperative Complications; Intraoperative Complications/prevention & control; intraoperative period; isoflurane; local anesthesia; local anesthetic agent; morphine; Nerve Block; Nociception; Nociception/drug effects; pain; pain assessment; Pain control; perineural drug administration; Peripheral nerve blockade; placebo; postoperative analgesia; postoperative pain; propofol; Rabbits and hares; randomized controlled trial; range of motion; Refinement; Sciatic Nerve; stifle; Stifle; stifle joint arthrotomy; Stifle/surgery; surgery; surgical wound; Surgical Wound; systolic blood pressure; visual analog scale; Animal Surgery and Non-drug Therapy; Laboratory Animal Science; Leporidae; LL040; LL882; LL884; rabbits; Veterinary Pharmacology and Anaesthesiology

Kluger, N., & Sleth, J.-C. (2016). Of Tattooed Rabbits, Parturients, and Neuraxial Blocks. *Regional Anesthesia and Pain Medicine*, *41*(3), 419–420. https://doi.org/10.1097/AAP.0000000000000354

Keywords: Anesthesia, Obstetrical; Nerve Block; Rabbits; Tattooing

Konakci, S., Kucukguclu, S., Gokmen, N., Akhisarlioglu, M., Idiman, F., Balkan, B. K., Gokel, E., & Ocmen, E. (2012). Epidural Administration of Magnesium Sulfate in the Rabbit: Can It Induce Motor and Sensory Blockade? *NEUROPHYSIOLOGY*, *44*(6), 448–454. https://doi.org/10.1007/s11062-012-9316-7

Keywords; breathing; carbon dioxide tension; controlled study; drug mechanism; epidural injection; evoked somatosensory response; heart rate; hemodynamics; lidocaine; magnesium; magnesium sulfate; mean arterial pressure; motor blockade; nerve block; rabbits; sensory blockade; sodium chloride; somatosensory evoked potentials

Laredo, F. G., Belda, E., Soler, M., Gil, F., Murciano, J., Sanchez-Campillo, J., & Agut, A. (2020). Short-Term Effects of Deliberate Subparaneural or Subepineural Injections With Saline Solution or Bupivacaine 0.75% in the Sciatic Nerve of Rabbits. *FRONTIERS IN VETERINARY SCIENCE*, *7*. https://doi.org/10.3389/fvets.2020.00217

Keywords: animal tissue; axon; bupivacaine; controlled study; epineurium; extrafascicular; histopathology; injection; intrafascicular; intraneural puncture; Leporidae; myelin sheath; nerve degeneration; nerve fiber; nerve function; nerve injury; New Zealand White (rabbit); peroneus nerve; prospective study; rabbits; sciatic nerve; sodium chloride; tibial nerve; ultrastructure; Animal Surgery and Non-drug Therapy; fibers; LL860; LL882; LL884; nerve cells; nerves; neurones; neuropathy; Non-Communicable Diseases and Injuries of Animals; rabbits; salt water; sight; Veterinary Pharmacology and Anaesthesiology; White New Zealand

Lemoine, S., Rouet, R., Manrique, A., & Hanouz, J.-L. (2014). Effect of long-chain triglyceride lipid emulsion on bupivacaine-induced changes in electrophysiological parameters of rabbit Purkinje cells. *FUNDAMENTAL & CLINICAL PHARMACOLOGY*, *28*(5), 481–488. https://doi.org/10.1111/fcp.12058

Keywords: action potential duration; Action Potentials; Anesthetics, Localanimal cellantagonists and inhibitors; Bupivacaine; Cardiotoxicity; controlled study; depolarization; Disease Models, Animal; drug effects; Electrophysiological parameters; electrophysiology; Emulsions; heart muscle conduction disturbance; heart muscle potential; heart repolarization; lipid emulsion; local anesthetic agent; long chain triacylglycerol; Long-chain triglyceride lipid emulsion; membrane

steady potential; nerve block; Purkinje Cells; Purkinje fiber; rabbits; Random Allocation; randomization; triacylglycerol; Triglycerides

Li, C., Wang, H., Liu, H., Yin, J., Cui, L., & Chen, Z. (2014). The prevention effect of poly (l-glutamic acid)/chitosan on spinal epidural fibrosis and peridural adhesion in the post-laminectomy rabbit model. *EUROPEAN SPINE JOURNAL*, *23*(11), 2423–2431. https://doi.org/10.1007/s00586-014-3438-0

Keywords: animal experiment; animal model; Biocompatible Materials; biomaterial; Cell Count; cell density; cell migration; Chitosan; controlled study; Disease Models, Animal; disease severity; drug effect; dura mater; Epidural fibrosis; Epidural Space; Failed back surgery syndrome; Fibroblasts; Fibrosis; Foreign-Body Reaction; Laminectomy; ligamentum flavum; Magnetic Resonance Imaging; metabolism; MRI; New Zealand White (rabbit); nuclear magnetic resonance imaging; nuclear magnetic resonance scanner; pathology; Poly (l-glutamic acid)/chitosan; polyglutamic acid; Polyglutamic Acid; postoperative complication; prophylaxis; Prostheses and Implants; prostheses and orthoses; rabbit model; Rabbits; radiological parameters; scar; spinal epidural adhesion; spinal epidural fibrosis; static electricity; Tissue Adhesions

Li, F., Liao, D., Liu, J., Xiao, L., Guo, J., Yi, M., & Zhou, C. (2015). Emulsified halothane produces long-term epidural anesthetic effect: A study in rabbits. *INTERNATIONAL JOURNAL OF CLINICAL AND EXPERIMENTAL PATHOLOGY*, *8*(5), 4573–4580.

Keywords: Anesthesia, Epidural; Anesthesia, Epidural/methods; Anesthetics, Inhalation; Anesthetics, Inhalation/administration & dosage/chemistry/pharmacology; Anesthetics, Local; Anesthetics, Local/administration & dosage/chemistry/pharmacology; animalchemistry; Chemistry, Pharmaceutical; comparative study; consciousness; Consciousness; Consciousness/drug effects; dose response; Dose-Response Relationship, Drug; Drug Carriers; Drug Carriers/chemistry; drug effects; Emulsified halothane; emulsified isoflurane; Emulsified isoflurane; emulsion; Emulsions; Emulsions/chemistry; Epidural anesthesia; Halothane; Halothane/administration & dosage/chemistry/pharmacology; inhalation anesthetic agent; Isoflurane; Isoflurane/pharmacology; Lidocaine; Lidocaine/pharmacology; local anesthetic agent; medicinal chemistry; Motor Activity; Motor Activity/drug effects; Pain Threshold; Pain Threshold/drug effects; Phospholipids; Phospholipids/chemistry; procedures; rabbits; Soybean Oil; soybean oil, phospholipid emulsion; Soybean Oil/chemistry; Time Factors

Li, Y., Yu, Y., Zhu, P., Duan, G., Li, Y., & Song, F. (2012). Chiral separation of bupivacaine hydrochloride by capillary electrophoresis with high frequency conductivity detection and its application to rabbit serum and pharmaceutical injection. *PHARMAZIE*, *67*(1), 25–30. https://doi.org/10.1691/ph.2012.1050

Keywords: Anesthetics, Local; animal; blood; Buffers; Bupivacaine; capillary electrophoresis; chemistry; Computer Simulation; Cyclodextrins; drug structure; Electric Conductivity; Electrochemistry; Electrophoresis, Capillary; enantiomer; Hydrogen-Ion Concentration; injection; Injections, Intravenous; intravenous drug administration; isolation and purification; local anesthetic agent; pH; process optimization; rabbits; stereoisomerism; Stereoisomerism

Liu, H., Chen, B., Li, S., & Yao, J. (2016). Dose-dependent neuroprotection of delta-opioid peptide [D-Ala(2), D-Leu(5)] enkephalin on spinal cord ischemia-reperfusion injury by regional perfusion into the abdominal aorta in rabbits. *JOURNAL OF VASCULAR SURGERY*, *63*(4), 1074–1081. https://doi.org/10.1016/j.jvs.2014.11.074

Keywords: abdominal aorta; animal experiment; animal model; aorta occlusion; Aorta, Abdominal; assessment of humans; blood flow; blood pressure monitoring; catheterization; Catheterization, Peripheral; controlled study; core temperature; Disease Models, Animal; dose response; Dose-Response Relationship, Drug; drug effects; Enkephalin, Leucine-2-Alanine;

enkephalin[2 alanine 5 leucine]; enkephalin[2 dextro alanine 5 dextro leucine]; gray matter; heart rate; hemodynamic parameters; histopathology; infrarenal aortic occlusion; Infusions, Intravenous; intravenous drug administration; Ligation; motoneuron; Motor Neurons; neuroprotection; Neuroprotective Agents; New Zealand White (rabbit); pathology; pathophysiology; rabbits; Regional Blood Flow; regional perfusion; Reperfusion Injury; sham procedure; sodium chloride; Spinal Cord Ischemia; spinal cord ventral horn; surgery; Tarlov scale; Time Factors

Liu, S., Zhou, S., Lu, X., Wang, H., & Li, J. (2018). Factors affecting localization and dispersion of alcohol in peripheral nerve block. *Journal of Rehabilitation Medicine*, *50*(9), 837–842. https://doi.org/10.2340/16501977-2381

Keywords: Disease Models, Animal; Ethanol/metabolism; Injections; Nerve Block/methods; Peripheral Nerves/physiopathology; Rabbits

Liu, X., Zhang, F., Li, L., He, Y., & Dong, Y. (2021). Reconstruction of Epidural Fat to Prevent Epidural Fibrosis after Laminectomy in Rabbits. *Tissue Engineering. Part A*. MEDLINE. https://doi.org/10.1089/ten.TEA.2021.0097

Keywords: Anesthesia; Epidural; Fibrosis; Rabbits

Louei Monfared, A. (2013). Applied anatomy of the rabbit's skull and its clinical application during regional anesthesia. *Global Veterinaria*, *10*(6), 653–657. Scopus. https://doi.org/10.5829/idosi.gv.2013.10.6.72111

Keywords: Applied anatomy; rabbits; Regional anesthesia; Skull

Lu, X., Li, B., Liu, S., Zhu, J., & Li, J. (2014). The dose and volume-response relationship of an ethanol-induced tibial nerve block in a rabbit model. *American Journal of Physical Medicine and Rehabilitation*, *93*(2), 138–145. Scopus. https://doi.org/10.1097/PHM.0b013e3182a92b57

Keywords: Nerve Block; Action Potentials; Action Potentials/drug effects/physiology; alcohol; central depressant agent; Central Nervous System Depressants; Central Nervous System Depressants/administration & dosage; CMAP; dose response; Dose-Response Relationship; Dose-Response Relationship, Drug; drug effect; Ethanol; Ethanol Neurolysis; Ethanol/administration & dosage; injection; Models, Animal; Nerve Block; pathology; pathophysiology; physiology; rabbits; Tibial Nerve; Tibial Nerve/drug effects/pathology/physiopathology

Mandlecha, R. H., Sewlikar, N. G., & Salunkhe, D. S. (2012). Comparative evaluation of Bupivacaine and Ketamine as spinal anesthesia in albino rabbits. *Pravara Medical Review*, *4*(1), 7–9. CAB Abstracts.

Keywords: Animal Models of Human Diseases; Non-drug Therapy and Prophylaxis of Humans; rabbits; VV400; VV710

Maulvi, F. A., Pillai, L. V., Patel, K. P., Desai, A. R., Shukla, M. R., Desai, D. T., Patel, H. P., Ranch, K. M., Shah, S. A., & Shah, D. O. (2020). Lidocaine tripotassium phosphate complex laden microemulsion for prolonged local anaesthesia: In vitro and in vivo studies. *Colloids and Surfaces. B, Biointerfaces*, *185*, 110632. https://doi.org/10.1016/j.colsurfb.2019.110632

Keywords: Anesthesia, Local; Analgesics/pharmacology; Anesthetics, Local/pharmacologyColoring Agents/chemistry; Diffusion; Electric Conductivity; Emulsions/chemistry; Ex vivo drug retention studies; Goats; Hydrogen-Ion Concentration; lidocaine-tPP-complex; Lidocaine/pharmacology; Local anaesthetic; Microemulsion; Particle Size; Phase Transition; Polyphosphates/pharmacology; Rabbits; Radiant heat tail-flick test; Rats, Wistar; Skin Irritancy Tests; Skin/drug effects; Static Electricity; Sustained drug release; Thermodynamics; Viscosity

Medina Serra, R., Dominguez, S., Vilalta, L., & Palacios, C. (2020). Ultrasound-guided epidural nerve block in a domestic dwarf rabbit (Oryctolagus cuniculus) undergoing ovariohysterectomy. *Veterinary Record Case Reports*, *8*(2). Scopus. https://doi.org/10.1136/vetreccr-2020-001071

Keywords: anaesthesia; analgesia; animal experiment; bupivacaine; buprecare; buprenorphine; domtor; elective surgery; epidural; epidural anesthesia; follow up; hysterectomy; interventional ultrasonography; isoflo; isoflurane; ketamine; lidocaine; lumbosacral region; marcain polyamp; medetomidine; meloxicam; metoclopramide; midazolam; midazolam normon; morfina serra; morphine; Oryctolagus cuniculus; ovariectomy; ovariohysterectomy; postoperative care; postoperative pain; premedication; propofol; rabbits; ranitidine; sedation; x-ray computed tomography

Mei, L., Xie, Y., Huang, Y., Wang, B., Chen, J., Quan, G., Pan, X., Liu, H., Wang, L., Liu, X., & Wu, C. (2018). Injectable in situ forming gel based on lyotropic liquid crystal for persistent postoperative analgesia. *Acta Biomaterialia*, *67*, 99–110. https://doi.org/10.1016/j.actbio.2017.11.057

Keywords: Analgesia; In situ forming gel; Injections; Local anesthetics; Lyotropic liquid crystal; Phase transition; Postoperative analgesia; Postoperative CareBiocompatible Materials/chemistry; Bupivacaine/blood/pharmacokinetics; Drug Liberation; Gels/chemistry; Liquid Crystals/chemistry; Nanostructures/chemistry; Phase Transition; Rabbits; Rats, Sprague-Dawley; Rheology; Solutions

Mencalha, R., dos Santos Sousa, C. A., Costa, O., & Abidu-Figueiredo, M. (2016). Ultrasound and gross anatomy of the brachial plexus and major nerves of the forelimb. An anesthetic approach using the domestic rabbit (Oyctolagus cuniculus) as an experimental model. *ACTA CIRURGICA BRASILEIRA*, *31*(4), 218–226. https://doi.org/10.1590/S0102-865020160040000001

Keywords: Models, Animal; Anatomic Landmarks; Anesthetics, Local/administration & dosageAxilla/blood supply/innervation; Axillary Artery/anatomy & histology; Brachial Plexus Block/methods/veterinary; Brachial Plexus/anatomy & histology/diagnostic imaging; Forelimb/innervation; Rabbits; Reproducibility of Results; Ultrasonography/methods

Moncao da Silva, R. M., Dorea Neto, F. de A., Barbosa, V. F., Nunes, N., Martins Filho, E. F., & Oria, A. P. (2015). INTRAOCULAR PRESSURE, MEAN ARTERIAL BLOOD PRESSURE AND PUPILLARY DIAMETER IN RABBITS ((Oryctolagus cuniculus)) SUBJECTED TO RETROBULBAR BLOCK WITH DIFFERENT ANESTHETIC PROTOCOLS. *Ciencia Animal Brasileira*, *16*(4), 630–638. https://doi.org/10.1590/1089-6891v16i428316

Keywords: Anesthesia; Intraocular Pressure; Blood Pressure; Rabbits; Retrobulbar Block

Monfared, A. L. (2013). Applied Anatomy of the Rabbit's Skull and its Clinical Application During Regional Anesthesia. *Global Veterinaria*, *10*(6), 653–657.

Keywords: anesthesia; Animal Anatomy and Morphology; Canidae; Canis; carnivores; cats; companion animals; dogs; Felidae; Felis; Fissipeda; Leporidae; LL070; LL400; LL860; Non-Communicable Diseases and Injuries of Animals; rabbits; traumas; vertebrates

Najman, I. E., Ferreira, J. Z., Abimussi, C. J. X., Floriano, B. P., Meneghetti, T. M., Oliva, V. N. L. S., & do Nascimento, P. J. (2015). Ultrasound-assisted periconal ocular blockade in rabbits. *Veterinary Anaesthesia and Analgesia*, *42*(4), 433–441. https://doi.org/10.1111/vaa.12237

Keywords: anesthesia; Anesthesia/veterinary; Anesthetics, Local/administration & dosageeye; Eye/diagnostic imaging/innervation; Injections, Intraocular/veterinary; Lidocaine/administration & dosage; Nerve Block/veterinary; Oculomotor Muscles/innervation; Ophthalmodynamometry/veterinary; periconal blockade; Prospective Studies; rabbits; Ultrasonography, Interventional/veterinary; ultrasound

Nessim, C., Sidéris, L., Turcotte, S., Vafiadis, P., Lapostole, A.-C., Simard, S., Koch, P., Fortier, L.-P., & Dubé, P. (2013). The effect of fluid overload in the presence of an epidural on the strength of colonic anastomoses. *The Journal of Surgical Research*, *183*(2), 567–573. https://doi.org/10.1016/j.jss.2013.03.030

Keywords: Anesthesia, Epidural; Fluid Therapy/adverse effects; Anastomosis, Surgical/methods; Anastomotic leak; Anastomotic Leak/epidemiology/physiopathology; Colloid; Colon; Colon/surgery; Colonic anastomoses; Crystalloid; Epidural; Euvolemia; Fluid balance; Fluid overload; Intraoperative Period; Models, Animal; Rabbits; Risk Factors; Sympathetic block; Wound Healing/physiology

Nevzati, E., Soleman, J., Schoepf, S. A., Coluccia, D., Fandino, J., & Marbacher, S. (2015). An Interlaminotomy New Zealand White Rabbit Model to Evaluate Novel Epidural Strategies. *JOURNAL OF NEUROLOGICAL SURGERY PART A-CENTRAL EUROPEAN NEUROSURGERY*, *76*(6), 466–472. https://doi.org/10.1055/s-0035-1558416

Keywords: adverse effects; animal experiment; animal model; animal tissue; Cicatrix; disease model; Disease Models, Animal; Epidural Space; interlaminotomy; Laminectomy; lower extremity paresis; microsurgery; Microsurgery; model; neurologic disease; New Zealand White (rabbit); New Zealand white rabbits; operation duration; paraplegia; paresis; procedures; rabbits; scar; spine surgery; standards; surgery; surgical microscope

Ong, B. H. E., Hidaka, Y., Kaneko, Y., Yamamoto, S., Mizutani, S., Sekiguchi, S., Torisu, S., & Naganobu, K. (2020). Effects of a single-bolus bupivacaine injection into the coccygeal spinal canal of rabbits. *JOURNAL OF VETERINARY MEDICAL SCIENCE*, *82*(2), 197–203. https://doi.org/10.1292/jvms.19-0555

Keywords: adverse event; Analgesia; Anesthesia, Local; Anesthesia, Local/adverse effects/veterinary; Anesthetics, Local; Anesthetics, Local/administration & dosageanimal experimentanus sphincter; Bupivacaine; Bupivacaine/administration & dosage; coccyx; Contrast Media; contrast medium; contrast medium extravasation; controlled study; Epidural anesthesia; epidural drug administration; epidural single-bolus injection technique; Epidural single-bolus injection technique; epidural space; Extravasation of Diagnostic and Therapeutic Materials; Extravasation of Diagnostic and Therapeutic Materials/veterinary; hindlimb; Injections, Epidural; Injections, Epidural/adverse effects/methods/veterinary; iohexol; Iohexol; iopaque 300; Leporidae; local anesthesia; local anesthetic agent; nociception; procedures; proprioception; rabbits; reflex; sodium chloride; Spinal Canal; tail; vertebral canal; veterinary medicine; walking

Onoglu, R., Narin, C., Kiyici, A., Sarkilar, G., Hacibeyoglu, G., Baba, F., & Sarigul, A. (2016). The Potential Effect of Epidural Anesthesia on Mesenteric Injury after Supraceliac Aortic Clamping in a Rabbit Model. *ANNALS OF VASCULAR SURGERY*, *34*, 227–233. https://doi.org/10.1016/j.avsg.2015.11.013

Keywords: Anesthesia, Epidural; abdominal aorta; adverse effects; Anesthesia, Epidural; Anesthetics, Local; Anesthetics, Local/administration & dosage; animal experiment; animal model; animal tissue; aorta clamping; aorta occlusion; Aorta, Abdominal; Aorta, Abdominal/surgery; biochemical marker; biological marker; Biomarkers; Biomarkers/blood; blood; blood flow; bolus injection; Constriction; continuous infusion; controlled study; Disease Models, Animal; drug effects; epidural anesthesia; epidural catheter; experimental rabbit; histopathology; injury severity; Interleukin-6; Interleukin-6/blood; intestine epithelium cell; intestine villus; ischemia-modified albumin; Lidocaine; Lidocaine/administration & dosage; ligation; local anesthetic agent; Malondialdehyde; Malondialdehyde/metabolism; Mesenteric Arteries; Mesenteric Arteries/drug effects/metabolism/pathology/physiopathology; mesenteric injury; Mesenteric Ischemia; Mesenteric

Ischemia/blood/pathology/physiopathology/prevention & control; metabolism; pathology; pathophysiology; Rabbits and hares; Regional Blood Flow; Reperfusion Injury; Reperfusion Injury/blood/pathology/physiopathology/prevention & control; Serum Albumin; Serum Albumin, Human; splanchnic blood flow; Splanchnic Circulation/drug effects; superoxide dismutase; Superoxide Dismutase; Superoxide Dismutase/metabolism; supracoeliac aortic occlusion; surgery; Time Factors; vascular clamp; vascular surgery; Vascular Surgical Procedures; Vascular Surgical Procedures/adverse effects

Ootaki, C., Kobayashi, Y., & Koyama, Y. (2021). Use of Continuous Electrical Impedance Measurement for Accurate Nerve Block in Rabbits. *PAIN MEDICINE*, *22*(4), 800–806. https://doi.org/10.1093/pm/pnaa433

Keywords: Electrical Impedance; Nerve Block; Nerve Injury; Sciatic Nerve Block; Sciatic Nerve/diagnostic imaging; Ultrasound-Guided Nerve Block; diagnostic imaging; Electrical Impedance; impedance; interventional ultrasonography; Leporidae; needle; Needles; Nerve Block; Nerve Injury; Rabbits; Sciatic Nerve; Sciatic Nerve Block; Ultrasonography, Interventional

Otero, P. E., Portela, D. A., Brinkyer, J. A., Tarragona, L., Zaccagnini, A. S., Fuensalida, S. E., & Ceballos, M. R. (2012). Use of electrical stimulation to monitor lumbosacral epidural and intrathecal needle placement in rabbits. *AMERICAN JOURNAL OF VETERINARY RESEARCH*, *73*(8), 1137–1141. https://doi.org/10.2460/ajvr.73.8.1137

Keywords: Anesthesia, Epidural; Anesthesia, Epidural/veterinary; back; Canis familiaris; Contrast Media; Contrast Media/administration & dosage/pharmacology; controlled study; Electric Stimulation; Electric Stimulation/instrumentation; epidural space; evoked muscle response; hindlimb; Injections, Epidural; Injections, Epidural/veterinary; Iohexol; Iohexol/administration & dosage/pharmacology; leg muscle; ligament; Lumbosacral Region; Lumbosacral Region/physiology; lumbosacral spine; Muscle Contraction; Muscle, Skeletal; Muscle, Skeletal/physiology; needle; nerve stimulation; Oryctolagus cuniculus; perceptive threshold; Rabbits/physiology; spine radiography; tail; HH410; LL070; LL600; LL822; rabbits; ZZ900

Pena, T., Campoy, L., & de Matos, R. (2020). Investigation of a maxillary nerve block technique in healthy New Zealand White rabbits (Oryctolagus cuniculus). *AMERICAN JOURNAL OF VETERINARY RESEARCH*, *81*(11), 843–848.

Keywords: abscess drainage; animal experiment; articaine; articaine plus epinephrine; debridement; dexmedetomidine; dye; food intake; head movement; immunosuppressive treatment; injection; ketamine; Leporidae; Maxillary Nerve; Nerve Block; nociception; numeric rating scale; Oryctolagus cuniculus; phase 1 clinical trial; phase 2 clinical trial; polyacrylamide gel electrophoresis; rabbit model; Rabbits; sodium chloride; veterinary medicine; visual analog scale; analgesics; drug injection; epinephrine; LL882; local anesthetics; Maxillary Nerve; Nerve Block/veterinary; nerve tissue; New Zealand White rabbit; sedation; sensory neurons; ZZ900

Rennó, C. C., Papini, J. Z. B., Cereda, C. M. S., Martinez, E., Montalli, V. A., de Paula, E., Pedrazzoli Júnior, J., Calafatti, S. A., & Tofoli, G. R. (2019). Preclinical Evaluation of Ropivacaine in 2 Liposomal Modified Systems. *Anesthesia and Analgesia*, *129*(2), 387–396. https://doi.org/10.1213/ANE.0000000000003837

Keywords: Anesthetics, Local/administration & dosage/blood/chemistry/pharmacokinetics; Cell Line; Disease Models, Animal; Drug Compounding; Liposomes; Motor Activity/drug effects; Nerve Block; Pain Threshold/drug effects; Pain, Postoperative/physiopathology/prevention & control; Rabbits; Rats, Wistar; Ropivacaine/administration & dosage/blood/chemistry/pharmacokinetics; Sciatic Nerve/drug effects

Richard, B. M., Newton, P., Ott, L. R., Haan, D., Brubaker, A. N., Cole, P. I., Ross, P. E., Rebelatto, M. C., & Nelson, K. G. (2012). The Safety of EXPAREL ® (Bupivacaine Liposome Injectable Suspension) Administered by Peripheral Nerve Block in Rabbits and Dogs. *Journal of Drug Delivery*, *2012*, 962101. MEDLINE. https://doi.org/10.1155/2012/962101

Keywords: Anesthesia; Bupivacaine; Nerve Block; Rabbits; Dogs; EXPAREL

Santos, M. A. A. P., Lucera, T. M. C., Horr, M., Santana, I. N., & Mattos-Junior, E. (2021). Comparative study on epidural administration of dexmedetomidine, dexmedetomidine-lidocaine or lidocaine in conscious rabbits. *LABORATORY ANIMALS*, *55*(4), 341–349. https://doi.org/10.1177/0023677221993156

Keywords: peridural; rabbits; regional anesthesia; α2-agonists; LL860; LL882; Non-Communicable Diseases and Injuries of Animals; Veterinary Pharmacology and Anaesthesiology

Shukr, M. (2014). Formulation, in vitro and in vivo evaluation of lidocaine HCl ocular inserts for topical ocular anesthesia. *Archives of Pharmacal Research*, *37*(7), 882–889. https://doi.org/10.1007/s12272-013-0317-x

Keywords: Administration, Ophthalmic; Administration, Topical; Anesthesia, Local/methodsChemistry, Pharmaceutical; Drug Evaluation, Preclinical/methods; Lidocaine/administration & dosage/chemical synthesis/metabolism; Ocular Absorption/drug effects/physiology; Rabbits

Thomas, F., Drolet, P., & Varin, F. (2013). Preliminary Mechanistic Pharmacokinetic Model for the Quantitative Determination of Ropivacaine Systemic Absorption during Femoral Nerve Block in Anesthetized Rabbits. *JOURNAL OF PHARMACOKINETICS AND PHARMACODYNAMICS*, *40*, S100–S101.

Keywords: Anesthesia; Pharmacokinetics; Ropivacaine; Femoral Nerve Block; Rabbits

Thomas, F., Martin-Boyer, V., Drolet, P., & Varin, F. (2014). A Mechanistic Pk/Pd Model for Ropivacaine Complex Absorption During Femoral Nerve Block in Anesthetized and Unanesthetized Rabbits. *JOURNAL OF PHARMACOKINETICS AND PHARMACODYNAMICS*, *41*, S90–S91.

Keywords: Anesthesia; Pharmacokinetics; Ropivacaine; Femoral Nerve Block; Rabbits

Ura, K., Sudo, H., Iwasaki, K., Tsujimoto, T., Ukeba, D., & Iwasaki, N. (2019). Effects of Intradiscal Injection of Local Anesthetics on Intervertebral Disc Degeneration in Rabbit Degenerated Intervertebral Disc. *JOURNAL OF ORTHOPAEDIC RESEARCH*, *37*(9), 1963–1971. https://doi.org/10.1002/jor.24347

Keywords: animal model; bupivacaine; cell death; confocal laser scanning microscopy; controlled study; degenerative changes; discoblock; drug efficacy; extracellular matrix; histology; in vivo study; intervertebral disk degeneration; Leporidae; lidocaine; local anesthetics; organ culture; sodium chloride; TUNEL assay

Venkateshwarlu, P., Suresh, P., & John, S. P. (2014). To study the local anesthetic effect of lidocaine and ropivacaine on reflex movements of nostrils in rabbits. *Indian Journal of Public Health Research and Development*, *5*(1), 246–250. Scopus. https://doi.org/10.5958/j.0976-5506.5.1.055

Keywords: anesthesia induction; anesthesia mechanism; animal experiment; controlled study; drug dose comparison; drug effect; drug megadose; drug potency; Lidocaine; local anesthesia; Local anesthetics; low drug dose; nose mucosa; rabbits; Reflex movements of nostrils; Reversible loss of sensory perception; Ropivacaine; sensitivity analysis; sneezing

Wang, H.-L., Zhang, G.-Y., Dai, W.-X., Shu, L.-P., Wei, Q.-F., Zheng, R.-F., & Lin, C.-X. (2019). Dose-dependent neurotoxicity caused by the addition of perineural dexmedetomidine to ropivacaine for continuous femoral nerve block in rabbits. *JOURNAL OF INTERNATIONAL MEDICAL RESEARCH*, *47*(6), 2562–2570. https://doi.org/10.1177/0300060519847368

Keywords: analgesic agent; Analgesics, Non-Narcotic; Analgesics, Non-Narcotic/administration & dosage/adverse effects; Anesthetics, Local; Anesthetics, Local/administration & dosage/adverse effects; animal experiment; animal tissue; concentration response; controlled study; demyelination; Dexmedetomidine; Dexmedetomidine/administration & dosage/adverse effects; dose response; Dose-Response Relationship, Drug; drug effect; electron microscopy; Femoral Nerve; femoral nerve block; Femoral Nerve/drug effects; histopathology; Leporidae; local anesthetic agent; myelin sheath; Nerve Block; Nerve Block/methods; Neurotoxicity Syndromes/etiology/pathology; New Zealand rabbit; pathology; perineural drug administration; procedures; quantitative analysis; rabbit model; Rabbits; Ropivacaine; Ropivacaine/administration & dosage/adverse effects; scoring system; sensorimotor function; sodium chloride; toxicity and intoxication

Wang, L., Cang, J., & Xue, Z. (2016). Protective effects of thoracic epidural anesthesia on hypoxia-induced acute lung injury in rabbits. *EXPERIMENTAL AND THERAPEUTIC MEDICINE*, *11*(5), 2021–2027. https://doi.org/10.3892/etm.2016.3151

Keywords: Anesthesia; animal experiment; animal tissue; blood analysis; bronchoalveolar lavage fluid; controlled study; enzyme linked immunosorbent assay; Epidural; experimental acute lung injury; histology; hypoxia; hypoxia induced acute lung injury; Inflammation; interleukin 10; interleukin 6; interleukin 8; lung parenchyma; lung surfactant; messenger RNA; phosphatidylcholine; phospholipid; protein; Pulmonary surfactants; rabbits; Respiratory distress syndrome; sevoflurane; thorax epidural anesthesia; transmission electron microscopy

Wang, Y., Wu, Y., Deng, M., & Kong, Q. (2021). Establishment of a Rabbit Intervertebral Disc Degeneration Model by Percutaneous Posterolateral Puncturing of Lumbar Discs Under Local Anesthesia. *WORLD NEUROSURGERY*, *154*, E830–E837. https://doi.org/10.1016/j.wneu.2021.08.024

Keywords: Animal model; Degenerative disc disease; Local anesthesia; Percutaneous posterolateral disc puncturing

Wu, T., Shi, Z., Song, H., Li, Y., & Li, J.-H. (2018). Cytotoxicity of local anesthetics on rabbit adipose-derived mesenchymal stem cells during early chondrogenic differentiation. *EXPERIMENTAL AND THERAPEUTIC MEDICINE*, *16*(4), 2843–2850. https://doi.org/10.3892/etm.2018.6539

Keywords: adipose derived stem cell; animal cell; animal experiment; apoptosis; apoptosis rate; beta1 integrin; bupivacaine; cell culture; cell differentiation; cell maturation; cell structure; cell viability; chondrogenesis; Chondrogenic differentiation; collagen type 1; collagen type 3; controlled study; cytotoxicity; Cytotoxicity; fibrocartilage; flow cytometry; gene expression; gene sequence; genetic analysis; glycosaminoglycan; in vitro study; Leporidae; lidocaine; local anesthetic agent; Local anesthetics; mepivacaine; mesenchymal stem cell; Mesenchymal stem cells; metabolic activity assay; mRNA expression level; MTS assay; protein expression; real time polymerase chain reaction; reverse transcription polymerase chain reaction; ropivacaine; transcription factor Sox9

Wu, X., Jhanji, V., Chen, H., Lin, H., Zhang, G., Brelen, M., & Chen, W. (2017). Change in flash visual evoked potentials in New Zealand albino rabbits after sub-tenon's anesthesia. *CUTANEOUS AND OCULAR TOXICOLOGY*, *36*(2), 118–124. https://doi.org/10.1080/15569527.2016.1189929

Keywords: adverse effects; anesthesia; Anesthesia, Local; Anesthesia, Local/adverse effects/methods; Anesthetics, Local; Anesthetics, Local/administration & dosage/adverse effects; animal; blindness; Blindness; Blindness/chemically induced/physiopathology; Bupivacaine;

Bupivacaine/administration & dosage/adverse effects; chemically induced; child; controlled study; drug effects; drug toxicity; electrophysiology; Evoked Potentials, Visual; Evoked Potentials, Visual/drug effects; Injections, Intraocular; intraocular drug administration; Lidocaine; Lidocaine/administration & dosage/adverse effects; local anesthesia; local anesthetic agent; Nerve Block; Nerve Block/adverse effects/methods; Ophthalmic anesthesia; pathophysiology; procedures; pupil reflex; Rabbits and hares; rat; Reflex, Pupillary; Reflex, Pupillary/drug effects; sub-tenon's anesthesia; Tenon Capsule; visual evoked potential; visual potential; Veterinary ophthalmology

Xiao KeQing, Xiao Mei, Meng Li, Du XiangYang, Hu Jing, Gao BaoFeng, Yu WenQiang, Wang XinJie, & Ban YanLin. (2015). Effect of subarachnoid nerve block anesthesia on glutamate transporter GLAST and GLT-1 expressions in rabbits. *Asian Pacific Journal of Tropical Medicine*, *8*(7), 562–565. Global Health.

Keywords: anesthesia; anesthetics; Animal Models of Human Diseases; bupivacaine; medical sciences; nerve cells; nerves; neurones; Protozoan, Helminth and Arthropod Parasites of Humans; rabbits; tropical countries; tropical zones; VV220; VV400

Xu, J., Chen, Y., Yue, Y., Sun, J., & Cui, L. (2012). Reconstruction of epidural fat with engineered adipose tissue from adipose derived stem cells and PLGA in the rabbit dorsal laminectomy model. *BIOMATERIALS*, *33*(29), 6965–6973. https://doi.org/10.1016/j.biomaterials.2012.06.010

Keywords: Adipocytes; adipogenesis; Adipose derived stem cells; Adipose Tissue; animal cell; animal experiment; animal tissue; autologous stem cell transplantation; Brain; cell differentiation; cell growth; cell isolation; cell labeling; cell structure; controlled study; Defects; dura mater; Dura mater; enzyme activity; epidural fat; Epidural fibrosis; Epidural Space; experimental model; experimental rabbit; Failed back surgery syndromes; Fibrosis; glycerol 3 phosphate dehydrogenase; Glycerolphosphate Dehydrogenase; High density; Histological observations; histology; in vivo study; In-vitro; Lactic Acid; Lactic-co-glycolic acid; Laminectomy; Laminectomy site; magnetic nanop; Magnetic nanoparticles; Magnetic Resonance Imaging; Magnetics; Nanoparticles; nuclear magnetic resonance imaging; Oryctolagus cuniculus; PLGA scaffolds; polyglactin; Polyglycolic Acid; porosity; postoperative complication; postoperative period; Rabbits; Restoration; Scaffolds (biology); scanning electron microscopy; scar; Scar tissues; Spinal cords; spine radiography; Spine surgery; staining; Stem Cells; Subcutaneous fat; Surgery; thoracolumbar spine; Time Factors; Tissue; Tissue Engineering; tissue scaffold

Yang, S., Uugangerel, T., Jang, I.-K., Lee, H.-C., Kim, J. M., Kang, B.-C., Kim, C. S., & Lee, K.-H. (2012). Insulin facilitates the recovery of myocardial contractility and conduction during cardiac compression in rabbits with bupivacaine-induced cardiovascular collapse. *Anesthesiology Research and Practice*, *2012*. Scopus. https://doi.org/10.1155/2012/878764

Keywords: arterial pressure; bupivacaine; cardiotoxicity; drug blood level; drug effect; electrocardiogram; endotracheal intubation; general anesthesia; heart conduction; heart massage; heart muscle contractility; insulin; insulin treatment; QRS complex; rabbits; resuscitation; return of spontaneous circulation; shock; sinus rhythm; sternotomy

Zhan, H., Ma, F., Huang, Y., Zhang, J., Jiang, X., & Qian, Y. (2018). Application of composite dissolving microneedles with high drug loading ratio for rapid local anesthesia. *European Journal of Pharmaceutical Sciences : Official Journal of the European Federation for Pharmaceutical Sciences*, *121*, 330–337. https://doi.org/10.1016/j.ejps.2018.06.014

Keywords: Microinjections; Needles; Administration, Cutaneous; Anesthesia, Local; Anesthetics, Local/administration & dosageDissolving microneedles; Drug loading ratio; Guinea Pigs; Lidocaine hydrochloride; Lidocaine/administration & dosage; Local anesthesia; Rabbits; Rats; Skin/metabolism

Zhou, Y., He, M., Zou, T., & Yu, B. (2015). Morphological changes in the sciatic nerve, skeletal muscle, heart and brain of rabbits receiving continuous sciatic nerve block with 0.2% ropivacaine. *INTERNATIONAL JOURNAL OF CLINICAL AND EXPERIMENTAL PATHOLOGY*, *8*(11), 13911–13920.

Keywords: Amides; Amides/administration & dosage/toxicity; Anesthetics, Local; Anesthetics, Local/administration & dosage/toxicity; Brain; Brain/drug effects/metabolism; cardiac muscle; Cell Shape; Cell Shape/drug effects; chemically induced; Continuous nerve block; drug effects; Edema; Edema/chemically induced/pathology; Heart; Heart/drug effects; Infusions, Parenteral; innervation; local anesthetic agent; metabolism; Morphology; Motor Activity; Motor Activity/drug effects; Muscle, Skeletal; Muscle, Skeletal/drug effects/innervation/pathology; Myocardium; Myocardium/pathology; necrosis; Necrosis; Nerve Block; Nerve Block/methods; Nerve Degeneration; Neurotoxicity Syndromes; Neurotoxicity Syndromes/etiology/pathology/physiopathology; parenteral drug administration; pathology; pathophysiology; procedures; Rabbits and hares; Ropivacaine; Sciatic Nerve; Sciatic Nerve/drug effects/pathology/physiopathology; skeletal muscle; Time Factors

Special Anesthetic Considerations

21 citations

Adami, C., Sanchez, R. F., & Monticelli, P. (2019). Use of atracurium and its reversal with neostigmine in 14 pet rabbits undergoing ophthalmic surgery: A retrospective study. *The Veterinary Record*, *184*(14), 443. https://doi.org/10.1136/vr.105266

Keywords: cardiovascular anaesthetic complications; cataract surgery; neuromuscular blocking agents; pet rabbits; Anesthesia/veterinaryAtracurium/administration & dosage; Cholinesterase Inhibitors/administration & dosage; Neostigmine/administration & dosage; Neuromuscular Nondepolarizing Agents/administration & dosage; Ophthalmologic Surgical Procedures/methods/veterinary; Rabbits/surgery; Retrospective Studies

Akbari, M. R., Amoli, F. A., Alhashemi, L. H., Ameri, A., Jafari, A. K., Eshraghi, B., & Bozorgi, S. (2012). Bupivacaine injection myotoxicity on extraocular muscles. A strabismus alternative treatment: Extended histological changes induced in a rabbit model. *Binocular Vision and Strabology Quarterly*, *27*(1), 15–22. Scopus.

Keywords; animal experiment; animal model; animal tissue; Bupivacaine; cell infiltration; controlled study; drug effects; experimental rabbit; extraocular muscle; histopathology; inflammatory cell; injection; muscle atrophy; muscle cell; muscle necrosis; muscle regeneration; Oculomotor Muscles; rabbits; Regeneration; scar formation; Strabismus

Bhatti, M. S., Tang, T. B., & Chen, H. C. (2018). Ocular Blood Flow in Rabbits under Deep Anesthesia: A Real-Time Measurement Technique and Its Application in Characterizing Retinal Ischemia. *SCIENTIFIC REPORTS*, *8*. https://doi.org/10.1038/s41598-018-24141-4

Keywords: Anesthesia; Anesthesia/methods; blood flow; carotid artery obstruction; Carotid Artery, External; Carotid Artery, External/physiopathology; Carotid Artery, Internal; Carotid Artery, Internal/physiopathology; Carotid Stenosis; Carotid Stenosis/diagnosis/physiopathology; external carotid artery; eye; Eye; Eye/blood supply; internal carotid artery; ischemia; Ischemia; Ischemia/diagnosis/physiopathology; laser Doppler flowmetry; Laser-Doppler Flowmetry; Leporidae; pathophysiology; procedures; Rabbits; Regional Blood Flow; vascularization

Bilgin, B., Gursoy, H., Basmak, H., Ozkurt, M., Tuncel, N., Canaz, F., Isiksoy, S., & Colak, E. (2013). The effects of bupivacaine injection and oral nitric oxide on extraocular muscle in the rabbit. *GRAEFES ARCHIVE FOR CLINICAL AND EXPERIMENTAL OPHTHALMOLOGY*, *251*(9), 2227–2233. https://doi.org/10.1007/s00417-013-2390-8

Keywords: Administration, Oral; Anesthetics, Local; animal experiment; animal model; animal structures; animal tissue; Bupivacaine; controlled study; drug effect; experimental rabbit; Extraocular muscle; histopathology; Hypertrophy; Injections, Intramuscular; Isosorbide Dinitrate; Muscle Contraction; muscle excitation; Muscle Fibers, Skeletal; muscle hypertrophy; muscle tone; muscle twitch; myofibrosis; Nitric oxide; Nitric Oxide Donors; Oculomotor Muscles; Rabbits; superior rectus muscle; tetanic muscle tension

Chae, J. J., Prausnitz, M. R., & Ethier, C. R. (2021). Effects of General Anesthesia on Intraocular Pressure in Rabbits. *JOURNAL OF THE AMERICAN ASSOCIATION FOR LABORATORY ANIMAL SCIENCE*, *60*(1), 91–95. https://doi.org/10.30802/AALAS-JAALAS-20-000016

Keywords: adverse event; anesthesia induction; Anesthesia, General; Anesthesia, General/adverse effects/veterinary; animal experiment; animal model; controlled study; drug effect; drug

withdrawal; experimental rabbit; eye surgery; general anesthesia; glaucoma; inhalation anesthesia; inhalation anesthetic agent; intraocular hypertension; Intraocular Pressure; IOP; Isoflurane; isothesia; ketamine; ketathesia; Leporidae; New Zealand White (rabbit); oculoplethysmography; oxygen; premedication; pressure measurement; Rabbits; risk; Tonometry, Ocular/veterinary; veterinary medicine; Xylazine

Chung, Y., Hancock, K. E., Nam, S.-I., & Delgutte, B. (2014). Coding of Electric Pulse Trains Presented through Cochlear Implants in the Auditory Midbrain of Awake Rabbit: Comparison with Anesthetized Preparations. *JOURNAL OF NEUROSCIENCE*, *34*(1), 218–231. https://doi.org/10.1523/JNEUROSCI.2084-13.2014

Keywords: Anesthesia; animal experiment; animal tissue; auditory stimulation; barbituric acid; barbituric acid derivative; cell synchronization; cochlea prosthesis; Cochlear implant; electrophysiology; electrostimulation; etacrynic acid; evoked brain stem auditory response; histology; Inferior colliculus; kanamycin; ketamine; latent period; methohexital; nerve cell membrane potential; nerve potential; pentobarbital; single unit activity; spike wave; Temporal coding; urethan; wakefulness; xylazine; Acoustic Stimulation/methods; Action Potentials/physiology; Anesthesia/methods; Anesthetics, Intravenous/administration & dosage; Auditory Perception/physiology; Auditory Perception/drug effects; cochlear implant; Cochlear Implants; Electric Stimulation/methods; Mesencephalon/physiology; Mesencephalon/drug effects; Rabbits; temporal coding; Wakefulness/physiology; Wakefulness/drug effects

de Mattos-Junior, E., da Cunha, O., Moraes Barros, L. F., Hamad Minervino, A. H., Nishimura, L. T., Gosuen Gonalves Dias, L. G., & Gaido Cortopassi, S. R. (2014). Dissociative anesthetic combination reduces intraocular pressure (IOP) in rabbits. *SEMINA-CIENCIAS AGRARIAS*, *35*(2), 905–909. https://doi.org/10.5433/1679-0359.2014v35n2p905

Keywords: Ketamine; Midazolam; Oryctolagus cuniculus; Tiletamine; Xylazine; Zolazepam

Devroe, S., van der Veeken, L., Bleeser, T., van der Merwe, J., Meeusen, R., van de Velde, M., Deprest, J., & Rex, S. (2021). The effect of xenon on fetal neurodevelopment following maternal sevoflurane anesthesia and laparotomy in rabbits. *NEUROTOXICOLOGY AND TERATOLOGY*, *87*. https://doi.org/10.1016/j.ntt.2021.106994

Keywords: Anesthesia; anesthesia induction; Anesthesia-induced neurotoxicity; animal cell; animal experiment; animal tissue; body weight; Brain; brain region; cell density; cell proliferation; controlled study; fetus; fetus development; laparotomy; Neonatal; nerve cell differentiation; Neuronal density; New Zealand rabbit; newborn; postnatal care; Pregnancy; progeny; Sevoflurane; survival rate; synapse; Xenon

Drobyshevsky, A., Miller, M. J., Li, L., Dixon, C. J., Venkatasubramanian, P. N., Wyrwicz, A. M., & Aksenov, D. P. (2020). Behavior and Regional Cortical BOLD Signal Fluctuations Are Altered in Adult Rabbits After Neonatal Volatile Anesthetic Exposure. *FRONTIERS IN NEUROSCIENCE*, *14*. https://doi.org/10.3389/fnins.2020.571486

Keywords: age distribution; amplitude of low frequency fluctuation; animal experiment behavior disorder; BOLD signal; brain function; cingulate gyrus; classical conditioning; cognitive defect; conditioning; connectivity; controlled study; developmental disorder; drug exposure; Dutch belted (rabbit); eyelid classical conditioning; fractional amplitude of low frequency fluctuation; functional connectivity; functional magnetic resonance imaging; general anesthesia; hippocampus; isoflurane; learning disorder; nerve cell network; nervous system parameters; neurotoxicity; newborn; perinatal period; radiological parameters; regional homogeneity; resting state fMRI; somatosensory cortex; task performance; thalamocortical tract; thalamus

Erol, M., Erol, H., Atalan, G., Ceylan, C., & Yonez, M. K. (2020). The Effects of Propofol-Sevoflurane, Midazolam-Sevoflurane and Medetomidine-Ketamine-Sevoflurane Anesthetic Combinations on Intraocular Pressure in Rabbits. *KAFKAS UNIVERSITESI VETERINER FAKULTESI DERGISI*, *26*(4), 477–481. https://doi.org/10.9775/kvfd.2019.23557

Keywords: Anesthesia; animal experiment; animal model; aqueous humor outflow; atlantooccipital joint; clinical assessment; clinical evaluation; comparative study; controlled study; demizolam; endotracheal intubation; epiglottis; extubation; eye surgery; Intraocular pressure; ketamine; ketasol; mastication; Medetomidine; midazolam; newborn care; postoperative complication; Propofol; rabbits; rabbit model; Sevoflurane

Holve, D. L., Gum, G. G., & Pritt, S. L. (2013). Effect of Sedation with Xylazine and Ketamine on Intraocular Pressure in New Zealand White Rabbits. *JOURNAL OF THE AMERICAN ASSOCIATION FOR LABORATORY ANIMAL SCIENCE*, *52*(4), 488–490.

Keywords: animal experiment; controlled study; experimental rabbit; Hypnotics and Sedatives; Intraocular pressure; ketamine; Rabbits; sedation; tonometry; Xylazine

Hopker, L. M., Neves, J., Nascimento, D., Mendonca, T., Zanoteli, E., & Allemann, N. (2017). Cross-sectional area measurement and fiber type distribution after bupivacaine injection in the rabbit extraocular muscle. *INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE*, *58*(8).

Keywords: Anesthesia; Intraocular; Rabbits

Miller, J., Arndt, T., Stake, S., Perronne, K., Schumacher, S., & Kamholz, A. (2017). Effects of Sedation by Acepromazine on Routine Clinical Pathology Parameters and Intraocular Pressure in Rabbits. *INTERNATIONAL JOURNAL OF TOXICOLOGY*, *36*(1), 76–76.

Keywords: Sedation; Anesthesia; Rabbits; Intraocular Pressure; Acepromazine

Moncao da Silva, R. M., Dorea Neto, F. de A., Barbosa, V. F., Nunes, N., Martins Filho, E. F., & Oria, A. P. (2015). INTRAOCULAR PRESSURE, MEAN ARTERIAL BLOOD PRESSURE AND PUPILLARY DIAMETER IN RABBITS ((Oryctolagus cuniculus)) SUBJECTED TO RETROBULBAR BLOCK WITH DIFFERENT ANESTHETIC PROTOCOLS. *Ciencia Animal Brasileira*, *16*(4), 630–638. https://doi.org/10.1590/1089-6891v16i428316

Keywords: Anesthesia; Intraocular Pressure; Blood Pressure; Rabbits; Retrobulbar Block

Najman, I. E., Ferreira, J. Z., Abimussi, C. J. X., Floriano, B. P., Meneghetti, T. M., Oliva, V. N. L. S., & do Nascimento, P. J. (2015). Ultrasound-assisted periconal ocular blockade in rabbits. *Veterinary Anaesthesia and Analgesia*, *42*(4), 433–441. https://doi.org/10.1111/vaa.12237

Keywords: anesthesia; Anesthesia/veterinary; Anesthetics, Local/administration & dosageeye; Eye/diagnostic imaging/innervation; Injections, Intraocular/veterinary; Lidocaine/administration & dosage; Nerve Block/veterinary; Oculomotor Muscles/innervation; Ophthalmodynamometry/veterinary; periconal blockade; Prospective Studies; rabbits; Ultrasonography, Interventional/veterinary; ultrasound

Nechaev, A., Semenov, B., Videnin, V., Belopolskii, A., Batrakov, A., Mikhalev, V., Nikitin, G., Anipchenko, P., Ladanova, M., Korochkina, E., & Kuznetsova, T. (2019). The effect of isoflurane anesthesia on the cardiac activity and contractility of pregnant rabbit uterine. *REPRODUCTION IN DOMESTIC ANIMALS*, *54*, 117–118.

Keywords: Anesthesia; Isoflurane; Inhalation anesthesia; rabbits; uterine; fetal; cardiac activity

Orihuela, A., & Ungerfeld, R. (2019). Acoustic characteristics of vocalisations emitted by the domestic rabbit (Oryctolagus cuniculus) during copula ejaculation and electro-ejaculation with or without anaesthesia. *World Rabbit Science*, *27*(3), 157–162. CAB Abstracts. https://doi.org/10.4995/wrs.2019.10809

Keywords: anesthesia; animal behavior; Animal Behaviour; Animal Reproduction and Embryology; animal rights; Animal Welfare; behavior; coitus; LL070; LL250; LL300; LL810; Oryctolagus cuniculus; rabbits; White New Zealand

Tutunaru, A. C., Șonea, A., & Sandersen, C. (2012). Rabbit general anesthesia for cataract surgery using cisatracurium as neuromuscular blocking drug. Case study. *Scientific Papers, Series D. Animal Science*, *55*, 255–257. CAB Abstracts.

Keywords: Animal Surgery and Non-drug Therapy; Diagnosis of Animal Diseases; Leporidae; LL070; LL860; LL882; LL884; LL886; Non-Communicable Diseases and Injuries of Animals; rabbits; Southern Veterinary Pharmacology and Anaesthesiology

van der Veeken, L., Inversetti, A., Galgano, A., Bleeser, T., Papastefanou, I., van de Merwe, J., Rex, S., & Deprest, J. (2021). Fetally-injected drugs for immobilization and analgesia do not modify fetal brain development in a rabbit model. *Prenatal Diagnosis*, *41*(9), 1164–1170. Scopus. https://doi.org/10.1002/pd.5954

Keywords: Analgesia; Rabbit; Fetus

Van der Veeken, L., Van der Merwe, J., Devroe, S., Inversetti, A., Galgano, A., Bleeser, T., Meeusen, R., Rex, S., & Deprest, J. (2019). Maternal surgery during pregnancy has a transient adverse effect on the developing fetal rabbit brain. *American Journal of Obstetrics and Gynecology*, *221*(4), 355.e1-355.e19. https://doi.org/10.1016/j.ajog.2019.07.029

Keywords: brain; cognition; development; Fetal Development; fetus; general anesthesia; long term; maternal surgery; motor; neurobehavior; pregnancy; rabbits; Anesthesia, General/methods; Anesthetics, Inhalation/pharmacology; Anesthetics, Intravenous/pharmacologyBlood Gas Analysis; Brain/drug effects/embryology/metabolism/pathology; Cell Count; Laparotomy/methods; Models, Animal; Neurons/drug effects/pathology; Pregnancy; Prenatal Exposure Delayed Effects; Propofol/pharmacology; Rabbits; Random Allocation; Sevoflurane/pharmacology; Synaptophysin/metabolism

Wu, X., Jhanji, V., Chen, H., Lin, H., Zhang, G., Brelen, M., & Chen, W. (2017). Change in flash visual evoked potentials in New Zealand albino rabbits after sub-tenon's anesthesia. *CUTANEOUS AND OCULAR TOXICOLOGY*, *36*(2), 118–124. https://doi.org/10.1080/15569527.2016.1189929

Keywords: adverse effects; anesthesia; Anesthesia, Local; Anesthesia, Local/adverse effects/methods; Anesthetics, Local; Anesthetics, Local/administration & dosage/adverse effects; animal; blindness; Blindness; Blindness/chemically induced/physiopathology; Bupivacaine; Bupivacaine/administration & dosage/adverse effects; chemically induced; child; controlled study; drug effects; drug toxicity; electrophysiology; Evoked Potentials, Visual; Evoked Potentials, Visual/drug effects; Injections, Intraocular; intraocular drug administration; Lidocaine; Lidocaine/administration & dosage/adverse effects; local anesthesia; local anesthetic agent; Nerve Block; Nerve Block/adverse effects/methods; Ophthalmic anesthesia; pathophysiology; procedures; pupil reflex; Rabbits and hares; rat; Reflex, Pupillary; Reflex, Pupillary/drug effects; sub-tenon's anesthesia; Tenon Capsule; visual evoked potential; visual potential; Veterinary ophthalmology

Intraoperative Support and Monitoring

24 citations

Adami, C., Sanchez, R. F., & Monticelli, P. (2019). Use of atracurium and its reversal with neostigmine in 14 pet rabbits undergoing ophthalmic surgery: A retrospective study. *The Veterinary Record*, *184*(14), 443. https://doi.org/10.1136/vr.105266

Keywords: cardiovascular anaesthetic complications; cataract surgery; neuromuscular blocking agents; pet rabbits; Anesthesia/veterinaryAtracurium/administration & dosage; Cholinesterase Inhibitors/administration & dosage; Neostigmine/administration & dosage; Neuromuscular Nondepolarizing Agents/administration & dosage; Ophthalmologic Surgical Procedures/methods/veterinary; Rabbits/surgery; Retrospective Studies

Alcayaga, J., Del Rio, R., Moya, E. A., Freire, M., & Iturriaga, R. (2012). Rabbit ventilatory responses to peripheral chemoexcitators: Effects of chronic hypoxia. *Advances in Experimental Medicine and Biology*, *758*, 307–313. https://doi.org/10.1007/978-94-007-4584-1_42

Keywords: Adenosine Triphosphate/pharmacology; Carotid Body/physiology; Hypoxia/physiopathology; Nerve Block; Nicotine/pharmacology; Rabbits; Respiration/drug effects; Sodium Cyanide/pharmacology

Ash, L. (2019). Anaesthesia in rabbits: Monitoring and making it safer. *Veterinary Times*, *49*(22), 16–17. CAB Abstracts.

Keywords: LL070; LL882; Veterinary Pharmacology and Anaesthesiology

Benato, L. (2012). *Blood gas analysis in pet rabbits (Oryctolagus cuniculus) during general anaesthesia.* (V. Roberts, Ed.; p. 46). British Veterinary Zoological Society; CAB Abstracts. https://search.ebscohost.com/login.aspx?direct=true&db=lah&AN=20123185076&site=ehost-live

Keywords: anesthesia; anesthetics; Animal Physiology and Biochemistry (Excluding Nutrition); LL070; LL600; LL882; Oryctolagus cuniculus; rabbits; Veterinary Pharmacology and Anaesthesiology

Benato, L., Chesnel, M., Eatwell, K., & Meredith, A. (2013). Arterial blood gas parameters in pet rabbits anaesthetized using a combination of fentanyl-fluanisone-midazolam-isoflurane. *JOURNAL OF SMALL ANIMAL PRACTICE*, *54*(7), 343–346. https://doi.org/10.1111/jsap.12081

Keywords: Acid-Base Equilibrium/physiology; Anesthesia, General; Anesthesia, General/veterinary; anesthetic agent; Anesthetics, Combined; Anesthetics, General; Anesthetics, General/administration & dosage; animal disease; blood; Blood Gas Analysis; Blood Gas Analysis/methods/veterinary; breathing rate; butyrophenone derivative; Butyrophenones; Butyrophenones/administration & dosage; drug effect; Fentanyl; Fentanyl/administration & dosage; fluanisone; general anesthesia; Lung; Lung/physiology; methodology; midazolam; Midazolam/administration & dosage; Monitoring, Physiologic; Monitoring, Physiologic/veterinary; Oryctolagus cuniculus; Oxygen; Oxygen/blood; physiologic monitoring; physiology; Rabbits/blood/physiology; Respiratory Rate; Respiratory Rate/drug effects

Bhatti, M. S., Tang, T. B., & Chen, H. C. (2018). Ocular Blood Flow in Rabbits under Deep Anesthesia: A Real-Time Measurement Technique and Its Application in Characterizing Retinal Ischemia. *SCIENTIFIC REPORTS*, *8*. https://doi.org/10.1038/s41598-018-24141-4

Keywords: Anesthesia; Anesthesia/methods; blood flow; carotid artery obstruction; Carotid Artery, External; Carotid Artery, External/physiopathology; Carotid Artery, Internal; Carotid Artery, Internal/physiopathology; Carotid Stenosis; Carotid Stenosis/diagnosis/physiopathology; external carotid artery; Eye; Eye/blood supply; internal carotid artery; ischemia; Ischemia; Ischemia/diagnosis/physiopathology; Laser-Doppler Flowmetry; Leporidae; pathophysiology; procedures; Rabbits; Regional Blood Flow; vascularization

Chiba, T., Sakuma, K., Komatsu, T., Cao, X., Aimoto, M., Nagasawa, Y., Shimizu, K., Takahashi, M., Hori, Y., Shirai, K., & Takahara, A. (2019). Physiological role of nitric oxide for regulation of arterial stiffness in anesthetized rabbits. *Journal of Pharmacological Sciences*, *139*(1), 42–45. Scopus. https://doi.org/10.1016/j.jphs.2018.11.003

Keywords: Acetylcholine; Anesthesia; animal experiment; animal tissue; Arterial Pressure; Arterial stiffness; Arteries; artery blood flow; cardio ankle vascular index; cardiovascular parameters; controlled study; diastolic blood pressure; drug effect; Heart Rate; L-NAME; Leporidae; n(g) nitroarginine methyl ester; Nitric oxide; physiology; pulse wave; Rabbits; regulatory mechanism; systolic blood pressure; Vascular Resistance; Vascular Stiffness

Cicero, L., Fazzotta, S., Palumbo, V. D., Cassata, G., & Lo Monte, A. I. (2018). Anesthesia protocols in laboratory animals used for scientific purposes. *Acta Bio-Medica : Atenei Parmensis*, *89*(3), 337–342. https://doi.org/10.23750/abm.v89i3.5824

Keywords: Anesthesia, General/methods/standards; Anesthetics/administration & dosage; Euthanasia, Animal/methods; Intraoperative Complications/prevention & control; Intubation, Intratracheal/methods; Monitoring, Intraoperative/methods; Preanesthetic Medication; Sample Size; Species Specificity

d'Angelo, E., Pecchiari, M., Bellemare, F., Cevenini, G., & Barbini, P. (2021). Heliox administration in anesthetized rabbits with spontaneous inspiratory flow limitation. JOURNAL OF APPLIED PHYSIOLOGY, 130(5), 1496–1509. https://doi.org/10.1152/japplphysiol.00830.2020

Keywords: Airway Resistance; heliox; Heliox; helium; Helium; Inspiratory flow limitation; Leporidae; Obstructive sleep apnea and hypopnea; Oxygen; Rabbits; Tidal Volume; Upper airways

Druce, K. (2015). Hypothermia in anaesthetised rabbits. *Veterinary Nursing Journal*, *30*(10), 284–286. CAB Abstracts. https://doi.org/10.1080/17415349.2015.1072072

Keywords: adverse reactions; anesthesia; drug action; Leporidae; LL070; LL882; mechanism of drug action; rabbits; Veterinary Pharmacology and Anaesthesiology

Kershaw, T. E. (2020). A summary of rabbit anaesthesia—Part II: intra-operative nursing and the recovery period. *Veterinary Nursing Journal*, *35*(9/12), 350–352. CAB Abstracts. https://doi.org/10.1080/17415349.2020.1806767

Keywords: anesthesia; Animal Surgery and Non-drug TherapyBritain; Leporidae; LL070; LL882; LL884; rabbits; therapeutics; Veterinary Pharmacology and Anaesthesiology

Kluge, K., Larenza Menzies, M. P., Kloeppel, H., Pearce, S. G., Bettschart-Wolfensberger, R., & Kutter, A. P. N. (2017). Femoral and sciatic nerve blockades and incision site infiltration in rabbits undergoing stifle joint arthrotomy. *LABORATORY ANIMALS*, *51*(1), 54–64. https://doi.org/10.1177/0023677215622734

Keywords: analgesia; Anesthetics, Local; Bupivacaine; Lidocaine; rabbits; anesthesia level; animal experiment; animal model; arthrotomy; buprenorphine; carprofen; controlled study; drug effects; experimental rabbit; femoral nerve; Femoral Nerve; fentanyl; heart rate; Intraoperative Complications; Intraoperative Complications/prevention & control; intraoperative period; isoflurane; local anesthesia; local anesthetic agent; morphine; Nerve Block; Nociception; Nociception/drug effects; pain; pain assessment; Pain control; perineural drug administration; Peripheral nerve blockade; placebo; postoperative analgesia; postoperative pain; propofol; Rabbits and hares; randomized controlled trial; range of motion; Refinement; Sciatic Nerve; Stifle; stifle joint arthrotomy; Stifle/surgery; surgery; Surgical Wound; systolic blood pressure; visual analog scale; Animal Surgery and Non-drug Therapy; Laboratory Animal Science; Leporidae; LL040; LL882; LL884; rabbits; Veterinary Pharmacology and Anaesthesiology

Lee, H. W., Machin, H., & Adami, C. (2018). Peri-anaesthetic mortality and nonfatal gastrointestinal complications in pet rabbits: A retrospective study on 210 cases. *VETERINARY ANAESTHESIA AND ANALGESIA*, *45*(4), 520–528. https://doi.org/10.1016/j.vaa.2018.01.010

Keywords: acepromazine; alfaxalone; Anesthesia; Anesthesia, General; Anesthesia, General/mortality/veterinary; Anesthesia/mortality/veterinary; animal experiment; body weight; buprenorphine; butorphanol; capnometry; carprofen; cohort analysis; Deep Sedation; Deep Sedation/mortality/veterinary; Doppler echocardiography; electrocardiography; endotracheal intubation; feces analysis; fentadon; fentanyl; food intake; gastrointestinal complications; Gastrointestinal Diseases; Gastrointestinal Diseases/etiology/veterinary; gastrointestinal symptom; general anesthesia; Incidence; isoflurane; lanthanum; Leporidae; medetomidine; meloxicam; metoclopramide; midazolam; midazolam maleate; morphine; mortality; mortality rate; Oryctolagus cuniculus; peri-anaesthetic mortality; pet rabbit; propofol; pulse oximetry; Rabbits; ranitidine; Retrospective Studies; retrospective study; Risk Factors; sedation; sevoflurane; torphasol; vetergesic; veterinary medicine

Mayer, J. (2012). Small Mammals: Anesthesia Monitoring in Rabbits and Rodents. In *Clin. Vet. Advis.: Birds and Exot. Pets* (pp. 547–549). Elsevier Inc.; Scopus. https://doi.org/10.1016/B978-1-4160-3969-3.00275-4

Keywords: Anesthesia; Rabbits; Rodents

Raillard, M., Detotto, C., Grepper, S., Beslac, O., Fujioka-Kobayashi, M., Schaller, B., & Saulacic, N. (2019). Anaesthetic and Perioperative Management of 14 Male New Zealand White Rabbits for Calvarial Bone Surgery. *ANIMALS*, *9*(11). https://doi.org/10.3390/ani9110896

Keywords: airway obstruction; Anaesthesia; Analgesia; anesthetic agent; animal experiment; arterial gas; arterial partial pressure of carbon dioxide; arterial partial pressure of oxygen; blood pressure monitoring; blood sampling; bone defect; buprenorphine; calvaria; Calvarial bone; capnometry; controlled study; Craniotomy; dexmedetomidine; duplocillin; end tidal carbon dioxide tension; esconarkon; grimace scale; isoflurane; ketamine; lidocaine; mean arterial pressure; meloxicam; New Zealand White (rabbit); operation duration; orthopedic surgery; Pain; pain assessment; Pain score; pentobarbital; perioperative period; postoperative analgesia; postoperative pain; pulse oximetry; pulse rate; Rabbit grimace; Rabbits; rectal temperature; respiration control; respiratory tract parameters; V-gel®; water temperature; xylazine

Reupke, V., Walliser, K., Perl, T., Kimmina, S., Schraepler, A., Quintel, M., & Kunze-Szikszay, N. (2017). Total intravenous anaesthesia using propofol and sufentanil allows controlled long-term ventilation in rabbits without neuromuscular blocking agents. *LABORATORY ANIMALS*, *51*(3), 284–291. https://doi.org/10.1177/0023677216660337

Keywords: Anaesthetics; anesthesia level; Anesthesia, Intravenous; Anesthesia, Intravenous/methods; Anesthetics, Intravenous; Anesthetics, Intravenous/pharmacologyanimal experiment; animal tissue; artificial ventilation; assisted ventilation; blood gas analyzer; breathing; breathing mechanics; clinical evaluation; computer; continuous infusion; controlled study; cornea reflex; drug dose increase; endotracheal tube; eyelid reflex; heart rate; histopathology; infusion pump; infusion rate; Intravenous; intravenous anesthesia; intravenous anesthetic agent; Leporidae; locomotion; lung parenchyma; mean arterial pressure; monitoring; neonatal ventilator; neuromuscular blocking agent; neuromuscular blocking agents; Neuromuscular blocking agents; Neuromuscular Blocking Agents; New Zealand White (rabbit); patient monitor; positive end expiratory pressure; pressure controlled ventilation; procedures; Propofol; Propofol/pharmacology; rabbits; Refinement; respiration control; Respiration, Artificial; Respiration, Artificial/methods; Sufentanil; Sufentanil/pharmacology; withdrawal reflex

Rodriguez, A. C., van Zeeland, Y. R. A., Schoemaker, N. J., & de Grauw, J. C. (2021). Agreement between invasive and oscillometric arterial blood pressure measurement using a high-definition oscillometric device in normotensive New Zealand White rabbits using two different anaesthetic protocols. *VETERINARY ANAESTHESIA AND ANALGESIA*, *48*(5), 679–687. https://doi.org/10.1016/j.vaa.2021.03.016

Keywords: alfaxalone; anesthesia; animal experiment; blood pressure; blood pressure monitoring; body weight; breathing rate; buprenorphine; butorphanol; diastolic blood pressure; embutramide; experimental study; high definition oscillometry; high-definition oscillometry; isoflurane; ketamine; mean arterial pressure; mebezonium iodide; medetomidine; midazolam; oscillometry; oxygen saturation; positive end expiratory pressure ventilation; pressure measurement; prospective study; pulse oximetry; rabbits; tetracaine; veterinary medicine; analgesia; face masks; intravenous injection; oxygen; standard deviation; systolic blood pressure

Romanov, A., Moon, R.-S., Wang, M., & Joshi, S. (2014). Paradoxical Increase in the Bispectral Index during Deep Anesthesia in New Zealand White Rabbits. *JOURNAL OF THE AMERICAN ASSOCIATION FOR LABORATORY ANIMAL SCIENCE*, *53*(1), 74–80.

Keywords: anesthesia level; anesthetic agent; Anesthetics; animal experiment; Animals, Laboratory; bispectral index; controlled study; Electroencephalography; etomidate; Isoflurane; New Zealand white (rabbit); perfusion; Propofol; Rabbits

Saritas, T. B., Saritas, Z. K., Korkmaz, M., & Sivaci, R. G. (2013). Comparison of Bispectral Index and Vital Parameters in Rabbits Receiving Propofol or Isoflurane Anesthesia. *ACTA SCIENTIAE VETERINARIAE*, *41*.

Keywords: Anesthesia; Isoflurane; Propofol; Rabbits

Sei, K., Fujita, M., Okawa, S., Hirasawa, T., Kushibiki, T., Sasa, H., Furuya, K., & Ishihara, M. (2016). Appropriate timing of blood sampling for blood gas analysis in the ventilated rabbit. *The Journal of Surgical Research*, *206*(2), 325–336. https://doi.org/10.1016/j.jss.2016.08.007

Keywords: Arterial sample; Blood gas analysis; Oxygen saturation; rabbits; Respiration, Artificial; Respiratory Rate; Sample timing; Venous sample; Anesthesia, General; Arteries; Biomarkers/blood; Blood Gas Analysis; Blood Specimen Collection/methods; Carbon Dioxide/blood; Oxygen/blood; Rabbits; Veins

Terakawa, Y., & Ichinohe, T. (2012). Large-dose epinephrine reduces skeletal muscle blood flow under general anesthesia in rabbits. *Anesthesia Progress*, *59*(3), 118–122. Scopus. https://doi.org/10.2344/12-00006.1

Keywords: adrenalin; Anesthesia, General; Anesthetics, Inhalation; animal; blood flow; Blood Pressure; Carotid Artery, Common; comparative study; drug effect; Epinephrine; Artery; flow kinetics; general anesthesia; Heart Rate; Infusions, Intravenous; inhalation anesthetic agent; instrumentation; intravenous drug administration; Isoflurane; Masseter Muscle; Muscle, Skeletal; quadriceps femoris muscle; Quadriceps Muscle; rabbits; Random Allocation; randomization; Regional Blood Flow; Rheology; skeletal muscle; vascularization; Vasoconstrictor Agents

Toman, H., Erbas, M., Sahin, H., Kiraz, H. A., Uzun, M., & Ovali, M. A. (2015). Comparison of the effects of various airway devices on hemodynamic response and QTc interval in rabbits under general anesthesia. *JOURNAL OF CLINICAL MONITORING AND COMPUTING*, *29*(6), 727–732. https://doi.org/10.1007/s10877-015-9659-x

Keywords: adrenergic stimulation; Anesthesia, General; Anesthesiology; animal experiment; animal model; Blood pressure; Cobra PLA; comparative study; devices; electrocardiogram; electrocardiography; Electrocardiography; Endotracheal intubation; Equipment Design; general anesthesia; heart muscle ischemia; Heart Rate; hemodynamic parameters; Hemodynamic response; Hemodynamics; Intubation, Intratracheal; Laryngeal mask airways; Laryngeal Masks; mean arterial pressure; Models, Animal; QTc; QTc interval; rabbits; Respiratory therapy; Supraglottic airway; supraglottic airway device; V-gel Rabbit

Tutunaru, A. C., Sonea, A., Drion, P., Serteyn, D., & Sandersen, C. (2013). Anaesthetic induction with alfaxalone may produce hypoxemia in rabbits premedicated with fentanyl/droperidol. *VETERINARY ANAESTHESIA AND ANALGESIA*, *40*(6), 657–659. https://doi.org/10.1111/vaa.12071

Keywords: Rabbits; Adjuvants, Anesthesia; Adjuvants, Anesthesia/administration & dosage/adverse effects; Administration, Intravenous; Administration, Intravenous/veterinary; alfaxalone; Anesthesia; Anesthesia/adverse effects/methods/veterinary; anesthetic agent; Anesthetics; Anesthetics, Combined; Anesthetics, Combined/administration & dosage/adverse effects; Anesthetics, Intravenous; Anesthetics, Intravenous/administration & dosage/adverse effects; Anesthetics/adverse effects; Anoxia; breathing rate; central depressant agent; chemically induced; Droperidol; Droperidol/administration & dosage/adverse effects; drug effects; Fentanyl; Fentanyl/administration & dosage/adverse effects; Heart Rate; Heart Rate/drug effects; Hypoxia/chemically induced/veterinary; intravenous anesthetic agent; intravenous drug administration; Preanesthetic Medication; Preanesthetic Medication/adverse effects/veterinary; Pregnanediones; Pregnanediones/administration & dosage/adverse effects; premedication; rabbits; Respiratory Rate; Respiratory Rate/drug effects; veterinary

Yin, H., Chen, W. M., & Zhao, P. (2013). Cerebral state index may reflect electrical brain activity during propofol or isoflurane anaesthesia in rabbits. *VETERINARY RECORD*, *172*(7), 184-+. https://doi.org/10.1136/vr.100600

Keywords: Anesthesia; Anesthesia/veterinary; animal disease; Brain; Brain/drug effects/physiology; drug effect; Isoflurane; Isoflurane/pharmacology; physiology; Propofol; Propofol/pharmacology; Rabbits

Postoperative Considerations

23 citations

Atalan, G., Atalan, G., Erol, H., Erol, M., Atasever, A., Dogan, Z., Gunes, V., Yonez, M. K., & Keles, I. (2019). Comparison of systemic effects of midazolam, ketamine, and isoflurane anaesthesia in rabbits. *JOURNAL OF VETERINARY RESEARCH*, *63*(2), 275–283. https://doi.org/10.2478/jvetres-2019-0035

Keywords: alanine aminotransferase; alkaline phosphatase; anesthesia; animal tissue; apoptosis; aspartate aminotransferase; biochemistry; blood carbon dioxide tension; blood gas analysis; blood oxygen tension; brain tissue; breathing rate; cell destruction; clinical evaluation; controlled study; creatine kinase; drug effect; gamma glutamyltransferase; glucose; heart rate; heart tissue; histology; histopathology; Isoflurane; ketamine; lactate dehydrogenase; liver tissue; midazolam; protein; systemic effects; troponin; urea nitrogen blood level; LL860; LL882; LL886; Non-Communicable Diseases and Injuries of Animals; rabbits; Veterinary Pharmacology and Anaesthesiology

Bilgin, B., Gursoy, H., Basmak, H., Ozkurt, M., Tuncel, N., Canaz, F., Isiksoy, S., & Colak, E. (2013). The effects of bupivacaine injection and oral nitric oxide on extraocular muscle in the rabbit. *GRAEFES ARCHIVE FOR CLINICAL AND EXPERIMENTAL OPHTHALMOLOGY*, *251*(9), 2227–2233. https://doi.org/10.1007/s00417-013-2390-8

Keywords: Administration, Oral; Anesthetics, Local; animal experiment; animal model; animal structures; animal tissue; Bupivacaine; controlled study; drug effect; experimental rabbit; extraocular muscle; Extraocular muscle; histopathology; Hypertrophy; Injections, Intramuscular; Isosorbide Dinitrate; Muscle Contraction; muscle excitation; Muscle Fibers, Skeletal; muscle hypertrophy; muscle tone; muscle twitch; myofibrosis; Nitric oxide; Nitric Oxide Donors; Oculomotor Muscles; Rabbits; superior rectus muscle; tetanic muscle tension

Botman, J., Hontoir, F., Gustin, P., Cambier, C., Gabriel, F., Dugdale, A., & Vandeweerd, J.-M. (2020). 10.1136/vr.105491 Postanaesthetic effects of ketamine-midazolam and ketamine-medetomidine on gastrointestinal transit time in rabbits anaesthetised with isoflurane. VETERINARY RECORD, 186(8). https://doi.org/10.1136/vr.105491

Keywords: abdominal radiography; Anesthesia; anesthesia induction; Anesthesia/methods/veterinary; anesthetic agent; Anesthetics, Combined; Anesthetics, Combined/pharmacologyanimal experiment; atipamezole; barium sulfate; controlled study; Cross-Over Studies; crossover procedure; drug effect; drug feces level; drug intestine level; drug tissue level; gastrointestinal; gastrointestinal stasis; Gastrointestinal Transit; Gastrointestinal Transit/drug effects; intestine transit time; Isoflurane; Isoflurane/administration & dosage; ketamine; Ketamine/pharmacology; Leporidae; Medetomidine; Medetomidine/pharmacology; midazolam; Midazolam/pharmacology; New Zealand White (rabbit); nimatek; procedures; rabbits; risk assessment; single blind procedure; Single-Blind Method; veterinary medicine; vetflurane; wakefulness

Chaniotakis, I., Antoniou, E., Kostomitsopoulos, N., Karapsias, S., Mirilas, P., & Salakos, C. (2018). Stress response to ovariohysterectomy in rabbits: Role of anaesthesia and surgery. *JOURNAL OF OBSTETRICS AND GYNAECOLOGY*, *38*(5), 697–701. https://doi.org/10.1080/01443615.2017.1400523

Keywords: Stress, Physiological; adrenalin blood level; Adrenocorticotropic Hormone; Adrenocorticotropic Hormone/blood; Anesthesia; animal cell; animal experiment; blood; C-Reactive Protein; C-Reactive Protein/metabolism; clinical evaluation; comparative study;

corticotropin; Epinephrine; Epinephrine/blood; hydrocortisone; Hydrocortisone; hydrocortisone blood level; Hydrocortisone/blood; Hysterectomy; Hysterectomy/adverse effects/methods; inflammation; Interleukin-6; Interleukin-6/blood; laparoscopic surgery; Laparoscopy; Laparoscopy/adverse effects; Leporidae; lidocaine; local anesthesia; metabolism; neuroendocrine disease; noradrenalin; Norepinephrine; Norepinephrine/blood; open surgery; Ovariectomy; Ovariectomy/adverse effects/methods; ovariohysterectomy; physiological stress; postoperative care; postoperative period; procedures; rabbits; skin incision; Stress, Physiological; surgical stress; surgical stress response; surgical technique; total ovariohysterectomy; Necrosis Factor-alpha; Tumor Necrosis Factor-alpha/blood

DiVincenti, L., Jr., Meirelles, L. A. D., & Westcott, R. A. (2016). Safety and clinical effectiveness of a compounded sustained-release formulation of buprenorphine for postoperative analgesia in New Zealand White rabbits. *JAVMA-JOURNAL OF THE AMERICAN VETERINARY MEDICAL ASSOCIATION*, *248*(7), 795–801. https://doi.org/10.2460/javma.248.7.795

Keywords: Analgesics, Opioid; Buprenorphine; controlled study; delayed release formulation; Delayed-Action Preparations; narcotic analgesic agent; Pain Measurement; Pain, Postoperative; physiology; Prostheses and Implants; prostheses and orthoses; Rabbits and hares; randomized controlled trial; Safety; single blind procedure; Single-Blind Method; surgery; Tibia; veterinary

Goldschlager, G. B., Gillespie, V. L., Palme, R., & Baxter, M. G. (2013a). Effects of multimodal analgesia with LowDose buprenorphine and meloxicam on fecal glucocorticoid metabolites after surgery in New Zealand white rabbits (Oryctolagus cuniculus). *Journal of the American Association for Laboratory Animal Science : JAALAS*, *52*(5), 571–576.

Keywords: Analgesia; Analgesics, Opioid; Anesthetics, Local; animal experiment; animal model; Anti-Inflammatory Agents, Non-Steroidal; Body Weight; Bupivacaine; Buprenorphine; Corticosterone; Drug Therapy, Combination; Feces; Glucocorticoids; ketamine; low drug dose; meloxicam; metabolite; Pain, Postoperative; rabbits; Surgical Procedures, Minimally Invasive; surgical technique; Thiazines; Thiazoles; xylazine; Pharmacology; Veterinary Pharmacology and Anaesthesiology; VV400; VV730

Greenfield, E. A. (2018). Administering anesthesia to rabbits. *Cold Spring Harbor Protocols*, *2018*(9), 699–701. Scopus. https://doi.org/10.1101/pdb.prot100206

Keywords: anesthesia; anesthetic agent; Animals, Laboratory; experimental animal; injection; Leporidae; Postoperative Care; Preoperative Care; Rabbits

Harris, J. (2016). Involvement of spinal α2-adrenoceptors in prolonged modulation of hind limb withdrawal reflexes following acute noxious stimulation in the anaesthetized rabbit. *European Journal of Neuroscience*, *43*(6), 834–845. Scopus. https://doi.org/10.1111/ejn.13185

Keywords: 2 (2 methoxy 1,4 benzodioxan 2 yl) 2 imidazoline; Adrenergic alpha-2 Receptor Antagonists; allyl isothiocyanate; alpha 2 adrenergic receptor; alpha 2 adrenergic receptor blocking agentanimal tissuearterial pressure; cardiovascular parameters; conditioning; controlled study; Descending inhibition; DNIC; electrostimulation; evoked response; facilitation; gastrocnemius muscle; Hindlimb; innervation; metabolism; metatarsophalangeal joint; Mustard oil; nerve cell inhibition; Neural Inhibition; neuromodulation; Nociception; nociceptive stimulation; noradrenergic system; physiology; Rabbits and hares; Receptors, Adrenergic, alpha-2; Reflex; RX 821002; semitendinous muscle; serotonin; Spinal cord; tibialis anterior muscle; withdrawal reflex

Ishida, T., Onuma, M., Ono, S., Murakami, A., & Sano, T. (2014). Anesthesia-associated death in 160 rabbits. *Japanese Journal of Veterinary Anesthesia & Surgery*, *45*(1), 7–12. CAB Abstracts. https://doi.org/10.2327/jvas.45.7

Keywords: anesthesia; Animal Surgery and Non-drug Therapy coronary diseases; death rate; Diagnosis of Animal Diseases; LL070; LL860; LL882; LL884; LL886; Non-Communicable Diseases and Injuries of Animals; preanesthetic medication; rabbits; Veterinary Pharmacology and Anaesthesiology

Jain, N., Himed, K., Toth, J. M., Briley, K. C., Phillips, F. M., & Khan, S. N. (2018). Opioids delay healing of spinal fusion: A rabbit posterolateral lumbar fusion model. *The Spine Journal : Official Journal of the North American Spine Society*, *18*(9), 1659–1668. MEDLINE. https://doi.org/10.1016/j.spinee.2018.04.012

Keywords: Analgesics, Opioid/adverse effects; Analgesics, Opioid/therapeutic use; Biology; Bone Transplantation/adverse effects; Bone Transplantation/methods; Bone; Fusion; Healing; Lumbar Vertebrae/surgery; MicroCT; Narcotics; Opioids; Rabbits; Spinal Fusion/methods; Spinal Fusion/adverse effects; Spine; Transplantation, Autologous/adverse effects; Transplantation, Autologous/methods; Wound Healing/drug effects

Kershaw, T. E. (2020b). A summary of rabbit anaesthesia—Part II: intra-operative nursing and the recovery period. *Veterinary Nursing Journal*, *35*(9/12), 350–352. CAB Abstracts. https://doi.org/10.1080/17415349.2020.1806767

Keywords: anesthesia; Animal Surgery and Non-drug TherapyBritain; Leporidae; LL070; LL882; LL884; rabbits; therapeutics; Veterinary Pharmacology and Anaesthesiology

Kluge, K., Larenza Menzies, M. P., Kloeppel, H., Pearce, S. G., Bettschart-Wolfensberger, R., & Kutter, A. P. N. (2017). Femoral and sciatic nerve blockades and incision site infiltration in rabbits undergoing stifle joint arthrotomy. *LABORATORY ANIMALS*, *51*(1), 54–64. https://doi.org/10.1177/0023677215622734

Keywords: analgesia; Anesthetics, Local; Bupivacaine; Lidocaine; rabbits; anesthesia level; animal experiment; animal model; arthrotomy; buprenorphine; carprofen; controlled study; drug effects; experimental rabbit; Femoral Nerve; fentanyl; heart rate; Intraoperative Complications; Intraoperative Complications/prevention & control; intraoperative period; isoflurane; local anesthesia; local anesthetic agent; morphine; Nerve Block; Nociception; Nociception/drug effects; pain; pain assessment; Pain control; perineural drug administration; Peripheral nerve blockade; placebo; postoperative analgesia; postoperative pain; propofol; Rabbits and hares; randomized controlled trial; range of motion; Refinement; Sciatic Nerve; Stifle; stifle joint arthrotomy; Stifle/surgery; surgery; surgical wound; Surgical Wound; systolic blood pressure; visual analog scale; Animal Surgery and Non-drug Therapy; Laboratory Animal Science; Leporidae; LL040; LL882; LL884; rabbits; Veterinary Pharmacology and Anaesthesiology

Li, C., Wang, H., Liu, H., Yin, J., Cui, L., & Chen, Z. (2014). The prevention effect of poly (l-glutamic acid)/chitosan on spinal epidural fibrosis and peridural adhesion in the post-laminectomy rabbit model. *EUROPEAN SPINE JOURNAL*, *23*(11), 2423–2431. https://doi.org/10.1007/s00586-014-3438-0

Keywords: animal experiment; animal model; Biocompatible Materials; biomaterial; Cell Count; cell density; cell migration; Chitosan; controlled study; Disease Models, Animal; disease severity; drug effect; dura mater; Epidural fibrosis; Epidural Space; Failed back surgery syndrome; Fibroblasts; Fibrosis; Foreign-Body Reaction; Laminectomy; ligamentum flavum; Magnetic Resonance Imaging; metabolism; MRI; New Zealand White (rabbit); nuclear magnetic resonance imaging; nuclear magnetic resonance scanner; pathology; Poly (l-glutamic acid)/chitosan;

polyglutamic acid; Polyglutamic Acid; postoperative complication; prophylaxis; Prostheses and Implants; prostheses and orthoses; rabbit model; Rabbits; radiological parameters; scar; spinal epidural adhesion; spinal epidural fibrosis; static electricity; Tissue Adhesions

Li, Y., Wang, Z., Hu, Q., Yu, D., Gao, J., Yang, L., Ge, Y., Chen, P., & Zong, L. (2017). Anesthetic postconditioning plus hypothermia following cardiopulmonary resuscitation protects the myocardial ultrastructure by modulating inflammatory events in rabbits. *Biomedical Reports*, *7*(4), 361–364. Scopus. https://doi.org/10.3892/br.2017.976

Keywords: anesthesia level; anesthetic postconditioning; animal experiment; animal tissue; blood sampling; cardiac muscle; Cardiopulmonary resuscitation; controlled study; down regulation; enzyme linked immunosorbent assay; experimental rabbit; heart arrest; Hypothermia; inflammation; interleukin 10; interleukin 8; myocardial ultrastructure; resuscitation; Sevoflurane; transmission electron microscopy; upregulation

Mei, L., Xie, Y., Huang, Y., Wang, B., Chen, J., Quan, G., Pan, X., Liu, H., Wang, L., Liu, X., & Wu, C. (2018). Injectable in situ forming gel based on lyotropic liquid crystal for persistent postoperative analgesia. *Acta Biomaterialia*, *67*, 99–110. https://doi.org/10.1016/j.actbio.2017.11.057

Keywords: Analgesia; In situ forming gel; Injections; Local anesthetics; Lyotropic liquid crystal; Phase transition; Postoperative analgesia; Postoperative Care; Biocompatible Materials/chemistry; Bupivacaine/blood/pharmacokinetics; Drug Liberation; Gels/chemistry; Liquid Crystals/chemistry; Nanostructures/chemistry; Phase Transition; Rabbits; Rats, Sprague-Dawley; Rheology; Solutions

Mirschberger, V., von Deimling, C., Heider, A., Spadavecchia, C., Rohrbach, H., & Zeiter, S. (2020). Fentanyl Plasma Concentrations after Application of a Transdermal Patch in Three Different Locations to Refine Postoperative Pain Management in Rabbits. *ANIMALS*, *10*(10). https://doi.org/10.3390/ani10101778

Keywords: analgesia; animal experiment; controlled study; drug blood level; enzyme linked immunosorbent assay; erythema; eye ointment; fentanyl; inner ear; medetomidine; midazolam; New Zealand White (rabbit); Postoperative analgesia; postoperative pain; prospective study; rabbits; Refinement; Transdermal fentanyl patch

Parmen, V. (2014). Electroacupuncture Analgesia in a Rabbit Ovariohysterectomy. *Journal of Acupuncture & Meridian Studies*, *7*(1), 15–24. https://doi.org/10.1016/j.jams.2013.05.004

Keywords: abdominal wall; Acupuncture Analgesia; Acupuncture Analgesia/adverse effects/instrumentation/methods; analgesia; animal experiment; clinical research; controlled study; electroacupuncture; Electroacupuncture; electroacupuncture analgesia; Electroacupuncture analgesia; Electroacupuncture/adverse effects/instrumentation/methods; homeostasis; Hysterectomy; Hysterectomy/methods; neuroleptanalgesia; Neuroleptanalgesia; New Zealand white (rabbit); operation duration; Ovariectomy; Ovariectomy/methods; Ovariohysterectomy; postoperative analgesia; Postoperative Complications; rabbits; Research Design; stimulation; thermoregulation; veterinary clinic

Pinho, R. H., Leach, M. C., Minto, B. W., Rocha, F. D. L., & Loureiro Luna, S. P. (2020). Postoperative pain behaviours in rabbits following orthopaedic surgery and effect of observer presence. *PLOS ONE*, *15*(10). https://doi.org/10.1371/journal.pone.0240605

Keywords: Analgesia/methodsDisease Models, Animal; Orthopedic Procedures/adverse effects; Orthopedics/trends; Pain Management/methods; Pain Measurement/methods; Pain, Postoperative/diagnosis/drug therapy/physiopathology; Rabbits; Pain, Postoperative/drug therapy; Pain, Postoperative/diagnosis; Pain, Postoperative/physiopathology

Raillard, M., Detotto, C., Grepper, S., Beslac, O., Fujioka-Kobaya M., Schaller, B., & Saulacic, N. (2019). Anaesthetic and Perioperative Management of 14 Male New Zealand White Rabbits for Calvarial Bone Surgery. *ANIMALS*, *9*(11). https://doi.org/10.3390/ani9110896

Keywords: airway obstruction; Anaesthesia; Analgesia; anesthetic agent; animal experiment; arterial gas; arterial partial pressure of carbon dioxide; arterial partial pressure of oxygen; blood pressure monitoring; blood sampling; bone defect; buprenorphine; calvaria; Calvarial bone; capnometry; controlled study; Craniotomy; dexmedetomidine; duplocillin; end tidal carbon dioxide tension; esconarkon; grimace scale; isoflurane; ketamine; lidocaine; mean arterial pressure; meloxicam; New Zealand White (rabbit); operation duration; orthopedic surgery; Pain; pain assessment; Pain score; pentobarbital; perioperative period; postoperative analgesia; postoperative pain; pulse oximetry; pulse rate; Rabbit grimace; Rabbits; rectal temperature; respiration control; respiratory tract parameters; V-gel®; water temperature; xylazine

Zeeland, Y. van, & Schoemaker, N. (2014b). Current anaesthetic considerations and techniques in rabbits. Part II: Induction, maintenance and the post-anaesthetic period. *European Journal of Companion Animal Practice*, *24*(4), 31–45. CAB Abstracts.

Keywords: Animal Surgery and Non-drug Therapy; CC700; LL070; LL882; LL884; Oryctolagus cuniculus; Professions: Practice and Service; rabbits; Veterinary Pharmacology and Anaesthesiology

Zernii, E. Y., Baksheev, V. E., Kabanova, E. I., Tiulina, V. V., Golovastova, M. O., Gancharova, O. S., Savchenko, M. S., Sotikova, L. F., Zamyatnin, A. A. J., Filippov, P. P., & Senin, I. I. (2018). Effect of General Anesthesia Duration on Recovery of Secretion and Biochemical Properties of Tear Fluid in the Post-Anesthetic Period. *Bulletin of Experimental Biology and Medicine*, *165*(2), 269–271. https://doi.org/10.1007/s10517-018-4145-3

Keywords: Anesthesia Recovery Period; Operative Time; Tears/chemistry/drug effects/metabolism; Anesthesia, General/adverse effects/veterinary; Anesthetics/pharmacologyantioxidant activity of tears; Biomarkers/analysis; corneal erosion; dry eye syndrome; Dry Eye Syndromes/chemically induced/metabolism/pathology; general anesthesia; Perioperative Period; Rabbits; Recovery of Function/drug effects; Time Factors; Water-Electrolyte Balance/drug effects

Zernii, E. Y., Gancharova, O. S., Baksheeva, V. E., Golovastova, M. O., Kabanova, E. I., Savchenko, M. S., Tiulina, V. V., Sotnikova, L. F., Zamyatnin, A. A. J., Philippov, P. P., & Senin, I. I. (2017). Mitochondria-Targeted Antioxidant SkQ1 Prevents Anesthesia-Induced Dry Eye Syndrome. *Oxidative Medicine and Cellular Longevity*, *2017*, 9281519. https://doi.org/10.1155/2017/9281519

Keywords: Anesthesia/adverse effects; Antioxidants; Dry Eye Syndromes/drug therapy/etiology; Mitochondria/metabolism; Plastoquinone/analogs & derivatives/pharmacology/therapeutic use

Zernii, E. Y., Golovastova, M. O., Baksheeva, V. E., Kabanova, E. I., Ishutina, I. E., Gancharova, O. S., Gusev, A. E., Savchenko, M. S., Loboda, A. P., Sotnikova, L. F., Zamyatnin, A. A. J., Philippov, P. P., & Senin, I. I. (2016). Alterations in Tear Biochemistry Associated with Postanesthetic Chronic Dry Eye Syndrome. *Biochemistry. Biokhimiia*, *81*(12), 1549–1557. https://doi.org/10.1134/S0006297916120166

Keywords: Anesthesia, General/adverse effectsAntioxidants/metabolism; Dry Eye Syndromes/enzymology/etiology; Glutathione Peroxidase/metabolism; Glutathione Reductase/metabolism; Glutathione Transferase/metabolism; Rabbits; Superoxide Dismutase/metabolism; Tears/enzymology/metabolism

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49 citations

Antonczyk, A., Liszka, B., Skrzypczak, P., & Kielbowicz, Z. (2019). Comparison of analgesia provided by lidocaine or morphine delivered epidurally in rabbits undergoing hindlimb orthopedic surgery. POLISH JOURNAL OF VETERINARY SCIENCES, 22(1), 31–35. https://doi.org/10.24425/pjvs.2018.125604

Keywords: Analgesics, Opioid; Analgesics, Opioid/administration & dosage/pharmacology; Anesthesia; Anesthesia/veterinary; Anesthetics, Local; Anesthetics, Local/administration & dosage/pharmacologyblood pressure; Blood Pressure; Epidural anesthesia; epidural drug administration; Hindlimb/surgery; Injections, Epidural; Intraoperative pain; ketamine; Ketamine/administration & dosage/pharmacology; Leporidae; Lidocaine; Lidocaine/administration & dosage/pharmacology; local anesthetic agent; Medetomidine; Medetomidine/administration & dosage/pharmacology; Morphine; Morphine/administration & dosage/pharmacology; narcotic analgesic agent; Pain, Postoperative; Pain, Postoperative/prevention & control/veterinary; Rabbits; surgery; veterinary medicine

Barter, L. S., & Kwiatkowski, A. (2013). Thermal Threshold Testing for Evaluation of Analgesics in New Zealand White Rabbits. JOURNAL OF THE AMERICAN ASSOCIATION FOR LABORATORY ANIMAL SCIENCE, 52(1), 44–47.

Keywords: acclimatization; analgesic activity; Analgesics; animal behavior; animal experiment; animal model; bladder; controlled study; Drug Evaluation, Preclinical; electrical equipment; experimental rabbit; false negative result; false positive result; Hot Temperature; Morphine; Pain Measurement; pain threshold; Rabbits; Sensory Thresholds; sham procedure; skin; sodium chloride; temperature measurement; thermal pain threshold; Thermosensing; thorax

Beguin, J. S., Chevallier, L., Rannou, B., Fontaine, J. J., & Benchekroun, G. (2020). Pain and analgesia in pet rabbits: A survey of the attitude of veterinary nurses. JOURNAL OF SMALL ANIMAL PRACTICE, 61(9), 588–592. https://doi.org/10.1111/jsap.12955

Keywords: Analgesia; Rabbits

Benato, L., Murrell, J. C., Blackwell, E. J., Saunders, R., & Rooney, N. (2020). Analgesia in pet rabbits: A survey study on how pain is assessed and ameliorated by veterinary surgeons. VETERINARY RECORD, 186(18). https://doi.org/10.1136/vr.105071

Keywords: abscess; age distribution; aggression; amantadine; Analgesia; Analgesia/veterinary; analgesic agentanimal behavior; animal welfare; automutilation; behavioural indicators; body position; body temperature; body weight loss; breathing rate; bruxism; buprenorphine; butorphanol; carprofen; castration; clinical competence; clinical trial; cystotomy; descriptive research; dexmedetomidine; drinking; drug cost; drug efficacy; drug safety; drug use; elective surgery; elevated blood pressure; experience; exploratory laparotomy; fentanyl; flunixin meglumine; food intake; gabapentin; gynecologic surgery; health care survey; Health Care Surveys; heart rate; hospital discharge; intermethod comparison; ketamine; ketoprofen; knowledge; laparotomy; Leporidae; licensing; lidocaine plus prilocaine; lumpectomy; medetomidine; meloxicam; methadone; mobilization; morphine; nonsteroid antiinflammatory

agent; online system; opiate; orthopedic surgery; ovariohysterectomy; pain; pain assessment; Pain Management; Pain Management/veterinary; Pain Measurement; Pain Measurement/veterinary; pain scale; pain severity; perioperative pain; perioperative period; perioperative complication; Pets; physician attitude; policy; postgraduate education; postoperative pain; prescription; professional practice; questionnaire; Rabbit Grimace Scale; rabbits; rating scale; reliability; Review; shuffling gait; Surgery, Veterinary; surgical drainage; tiletamine plus zolazepam; tooth disease; tooth extraction; tramadol; treatment duration; trend study; veterinary care; veterinary clinic; veterinary medicine; veterinary surgeon; veterinary surgery; vocalization; xylazine

Benato, L., Rooney, N. J., & Murrell, J. C. (2019). Pain and analgesia in pet rabbits within the veterinary environment: A review. VETERINARY ANAESTHESIA AND ANALGESIA, 46(2), 151–162. https://doi.org/10.1016/j.vaa.2018.10.007

Keywords: acetylsalicylic acid; acupuncture; analgesia; analgesic activity; Analgesics, Opioid; Analgesics, Opioid/therapeutic use; animalAnti-Inflammatory Agents, Non-Steroidal; Anti-Inflammatory Agents, Non-Steroidal/therapeutic use; behavior change; bupivacaine; buprenorphine; butorphanol; butyrophenone; carprofen; Castration; Castration/veterinary; cesarean section; cryotherapy; facial expression; fentanyl; fluanisone; flunixin meglumine; hypnorm; hypotension; ketoprofen; Leporidae; lidocaine plus prilocaine; local anesthesia; meloxicam; methadone; morphine; narcotic analgesic agent; nonsteroid antiinflammatory agent; opiate; orchiectomy; oxymorphone; pain; pain amelioration; pain assessment; pain intensity; Pain Management; Pain Management/veterinary; Pain Measurement; Pain Measurement/veterinary; Pain, Postoperative; Pain, Postoperative/drug therapy/veterinary; paracetamol; postoperative pain; Rabbits/surgery; Review; surgery; tattooing; thermotherapy; tissue injury; tramadol; veterinary drug; Veterinary Drugs; Veterinary Drugs/therapeutic use; veterinary medicine

Benato, L., Rooney, N., & Murell, J. (2018). A review on pain and analgesia in pet rabbits. (S. Pellett, Ed.; p. 87). British Veterinary Zoological Society; CAB Abstracts. https://search.ebscohost.com/login.aspx?direct=true&db=lah&AN=20193073440&site=ehost-live

Keywords: antinociceptive properties; Laboratory Animal Science; Leporidae; LL040; LL860; LL882; Non-Communicable Diseases and Injuries of Animals; NSAIDS; pain management; rabbits; Veterinary Pharmacology and Anaesthesiology

Canpolat, D. G., Soylu, E., Dogruel, F., Kutuk, N., & Ugur, F. (2018). Comparison of the Analgesic Effects of Pulse Radiofrequency and Cryoablation in Rabbits with Mental Nerve Neuropathic Pain. NIGERIAN JOURNAL OF CLINICAL PRACTICE, 21(5), 585–590. https://doi.org/10.4103/njcp.njcp_134_17

Keywords: analgesic agent; Analgesics; comparative study; Cryoablation; Cryosurgery; Leporidae; mental nerve; Neuralgia; neuropathic pain; procedures; Pulsed Radiofrequency Treatment; Rabbits; Rats; Sprague Dawley rat; Treatment Outcome

DiVincenti, L., Jr., Meirelles, L. A. D., & Westcott, R. A. (2016). Safety and clinical effectiveness of a compounded sustained-release formulation of buprenorphine for postoperative analgesia in New Zealand White rabbits. JAVMA-JOURNAL OF THE AMERICAN VETERINARY MEDICAL ASSOCIATION, 248(7), 795–801. https://doi.org/10.2460/javma.248.7.795

Keywords: Analgesics, Opioid; Buprenorphine; controlled study; delayed release formulation; Delayed-Action Preparations; narcotic analgesic agent; Pain Measurement; Pain, Postoperative; physiology; Prostheses and Implants; prostheses and orthoses; Rabbits and hares; randomized controlled trial; Safety; single blind procedure; Single-Blind Method; surgery; Tibia; veterinary

Dong, S.-A., Gong, L.-R., Yu, J.-B., & Kan, Y.-X. (2020). The Role of Melatonin in Electroacupuncture Alleviating Lung Injury Induced by Limb Ischemia-Reperfusion in Rabbits. Medical Science Monitor : International Medical Journal of Experimental and Clinical Research, 26, e922525. https://doi.org/10.12659/MSM.922525

Keywords: Disease Models, Animal; Electroacupuncture/methods; Lung Injury/therapy; Melatonin/metabolism/pharmacology; Rabbits; Reperfusion; Reperfusion Injury/metabolism/therapy; Tumor Necrosis Factor-alpha/metabolism

Flecknell, P. (2018). Analgesics in Small Mammals. The Veterinary Clinics of North America. Exotic Animal Practice, 21(1), 83–103. https://doi.org/10.1016/j.cvex.2017.08.003

Keywords: Analgesia; Analgesia/methods/veterinary; Analgesics/administration & dosage; Guinea pig; Mouse; Pain assessment; Pain Management/veterinary; Pain Measurement/veterinary; Pain/drug therapy/veterinary; Rabbits; Rat; Rodentia; Rodents

Giorgi, M., Mills, P. C., Tayari, H., Rota, S., Breghi, G., & Briganti, A. (2013). Plasma Concentrations of Tapentadol and Clinical Evaluations of a Combination of Tapentadol Plus Sevoflurane for Surgical Anaesthesia and Analgesia in Rabbits (Oryctolagus cuniculus) Undergoing Orchiectomy. ISRAEL JOURNAL OF VETERINARY MEDICINE, 68(3), 141–148.

Keywords: Opioid; Pain; rabbits; Sevoflurane; Tapentadol

Goldberg, M. E. (2016). Pain management in ferrets, rabbits and rodents: Veterinary technician's role. 82–90. CAB Abstracts. https://search.ebscohost.com/login.aspx?direct=true&db=lah&AN=20163321558&site=ehost-live

Keywords: Caviidae; CC700; ferrets; Fissipeda; guinea pigs; Leporidae; LL070; LL860; LL882; mice; Muridae; Mustelidae; Non-Communicable Diseases and Injuries of Animals; pain killers; pain management; pathophysiology; Professions: Practice and Service; rabbits; rats; rodents; Veterinary Pharmacology and Anaesthesiology

Goldschlager, G. B., Gillespie, V. L., Palme, R., & Baxter, M. G. (2013a). Effects of multimodal analgesia with LowDose buprenorphine and meloxicam on fecal glucocorticoid metabolites after surgery in New Zealand white rabbits (Oryctolagus cuniculus). Journal of the American Association for Laboratory Animal Science : JAALAS, 52(5), 571–576.

Keywords: Analgesia/veterinary; Analgesics, Opioid/administration & dosage/adverse effects; Anesthetics, Local/administration & dosage; Anti-Inflammatory Agents, Non-Steroidal/administration & dosage/adverse effects; Body Weight/drug effects; Bupivacaine/administration & dosage; Buprenorphine/administration & dosage/adverse effects; Corticosterone/metabolism; Drug Therapy, Combination; Feces; Glucocorticoids/metabolism; Meloxicam; Minimally Invasive Surgical Procedures/veterinary; Pain, Postoperative/drug

therapy/metabolism/veterinary; Rabbits; Thiazines/administration & dosage/adverse effects; Thiazoles/administration & dosage/adverse effects

Gusak, V., Turkovic, V., Nesek-Adam, V., Lerotic, I., Popovic, M., Brajenovic, N., Karaconji, I. B., & Vnuk, D. (2013). Lidocaine serum concentration after epidural administration in combination with morphine and fentanyl in rabbit—A preliminary study. RESEARCH IN VETERINARY SCIENCE, 94(3), 651–655. https://doi.org/10.1016/j.rvsc.2012.10.001

Keywords: Anesthesia, Epidural; Anesthesia, Epidural/methods/veterinary; Anesthetics, Combined; Anesthetics, Combined/administration & dosage/pharmacology; animal experiment; arterial gas; blood sampling; Body Temperature; Body Temperature/drug effects; Concentration; controlled study; drug absorption; drug blood level; Drug Interactions; epidural space; Fentanyl; Fentanyl/administration & dosage/pharmacology; general anesthesia; Heart Rate; Heart Rate/drug effects; Injections, Epidural; Lidocaine; Lidocaine/administration & dosage/blood/pharmacokinetics; lidokain; morfin klorid; Morphine; Morphine/administration & dosage/pharmacology; Narcotics; Narcotics/administration & dosage/pharmacology; Oryctolagus cuniculus; rabbits; Serum; unclassified drug; vasodilatation; adjuvants; analgesia

Hsieh, Y.-L., Hong, C.-Z., Liu, S.-Y., Chou, L.-W., & Yang, C.-C. (2016). Acupuncture at distant myofascial trigger spots enhances endogenous opioids in rabbits: A possible mechanism for managing myofascial pain. Acupuncture in Medicine : Journal of the British Medical Acupuncture Society, 34(4), 302–309. MEDLINE. https://doi.org/10.1136/acupmed-2015-011026

Keywords: ACUPUNCTURE; Acupuncture Points; Acupuncture Therapy; beta-Endorphin/metabolism; beta-Endorphin/blood; beta-Endorphin/cerebrospinal fluid; Enkephalins/metabolism; Enkephalins/blood; Enkephalins/cerebrospinal fluid; Facial Pain/therapy; Ganglia, Spinal/metabolism; Muscle, Skeletal/metabolism; MYOFASCIAL PAIN; Pain Management; PAIN RESEARCH; Rabbits; Trigger Points

Jain, N., Himed, K., Toth, J. M., Briley, K. C., Phillips, F. M., & Khan, S. N. (2018). Opioids delay healing of spinal fusion: A rabbit posterolateral lumbar fusion model. The Spine Journal : Official Journal of the North American Spine Society, 18(9), 1659–1668. MEDLINE. https://doi.org/10.1016/j.spinee.2018.04.012

Keywords: Analgesics, Opioid/adverse effects; Analgesics, Opioid/therapeutic use; Biology; Bone Transplantation/adverse effects; Bone Transplantation/methods; Bone; Fusion; Healing; Lumbar Vertebrae/surgery; MicroCT; Narcotics; Opioids; Rabbits; Spinal Fusion/methods; Spinal Fusion/adverse effects; Spine; Transplantation, Autologous/adverse effects; Transplantation, Autologous/methods; Wound Healing/drug effects

Kim, C., Barbut, D., Heinemann, M. H., Pasternak, G., & Rosenblatt, M. I. (2014). Synthetic Neurotensin Analogues Are Nontoxic Analgesics for the Rabbit Cornea. INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE, 55(6), 3586–3593. https://doi.org/10.1167/iovs.13-13050

Keywords: analgesic activity; Analgesics; animal cell; animal experiment; animal tissue; Blinking; Blotting, Western; cell migration; cell motility; Cell Movement; Cells, Cultured; Chromatography, High Pressure Liquid; controlled study; Cornea; Corneal wound healing; cytotoxicity; cytotoxicity assay; Disease Models, Animal; dose response; Eye Injuries; gene expression; Gene Expression

Regulation; high performance liquid chromatography; histology; Immunohistochemistry; Neurotensin; neurotensin derivative; neurotensin receptor; NT71 peptide; NT72 peptide; ophthalmic esthesiometer; Ophthalmic Solutions; Peptides; photorefractive keratectomy; polyacrylamide gel electrophoresis; polymerase chain reaction; proxymetacaine; rabbits; Receptors, Neurotensin; RNA, Messenger; slit lamp; sodium channel blocking agent; tetracaine; Topical analgesia; Trigeminal Ganglion; unclassified drug; Western blotting; Wound Healing

Liu, L.-Y. (2015). A New Type of Signaling Pathways as Pilomotor Lines along Skin for Transmitting Acupuncture Signals to Produce Acupuncture Effects. The Chinese Journal of Physiology, 58(3), 165–177. https://doi.org/10.4077/CJP.2015.BAD290

Keywords: Acupuncture Analgesia; Meridians; Catecholamines/metabolism; Medicine, Chinese Traditional; Muscle, Skeletal/innervation; Pain Threshold; Phenylephrine/pharmacology; Rats; Rats, Wistar; Signal Transduction/physiology

Mans, C. (2020). Insights into pain assessment and management in rabbits. The Veterinary Record, 186(18), 600–602. https://doi.org/10.1136/vr.m2265

Keywords: Rabbits; Pain Management/veterinary; Pain Measurement/veterinary; Pain/veterinary

Mayer, J. (2013). La La land for rabbits: Anesthesia and analgesia. Small Animal and Exotics Proceedings. North American Veterinary Conference, Orlando, Florida, USA, 19-23 January 2013., Gainesville, USA. CAB Abstracts. https://search.ebscohost.com/login.aspx?direct=true&db=lah&AN=20133225622&site=ehost-live

Keywords: administration routes; analgesia; anesthesia; HH405; inhaled anesthetics; injectable anesthetics; Leporidae; LL070; LL882; LL950; NSAIDS; Pesticides and Drugs; rabbits; rodents; Toxicology and Poisoning of Animals; Veterinary Pharmacology and Anaesthesiology

Mei, L., Xie, Y., Huang, Y., Wang, B., Chen, J., Quan, G., Pan, X., Liu, H., Wang, L., Liu, X., & Wu, C. (2018). Injectable in situ forming gel based on lyotropic liquid crystal for persistent postoperative analgesia. Acta Biomaterialia, 67, 99–110. https://doi.org/10.1016/j.actbio.2017.11.057

Keywords: Analgesia; In situ forming gel; Injections; Local anesthetics; Lyotropic liquid crystal; Phase transition; Postoperative analgesia; Postoperative CareBiocompatible Materials/chemistry; Bupivacaine/blood/pharmacokinetics; Drug Liberation; Gels/chemistry; Liquid Crystals/chemistry; Nanostructures/chemistry; Phase Transition; Rabbits; Rats, Sprague-Dawley; Rheology; Solutions

Miller, J. R., Stuth, E., Hopp, F., Zuperku, E., & Stucke, A. (2016). The pontine respiratory group partially mediates clinical opioid-induced respiratory depression in young rabbits. FASEB JOURNAL, 30.

Keywords: Analgesia; opioids; rabbits; respiration

Miller, J., Stuth, E., Hopp, F., Zuperku, E., & Stucke, A. (2015). The Pontine Respiratory Group (PRG) Partially Mediates Clinical Opioid-Induced Respiratory Depression in Adult Rabbits. FASEB JOURNAL, 29.

Keywords: Analgesia; opioids; rabbits; respiration

Miller, J., Zuperku, E., Stuth, E., Hopp, F., & Stucke, A. (2014). The pontine respiratory group is involved in opioid-induced respiratory depression in adult rabbits. FASEB JOURNAL, 28(1).

Keywords: Analgesia; opioids; rabbits; respiration

Mirschberger, V., von Deimling, C., Heider, A., Spadavecchia, C., Rohrbach, H., & Zeiter, S. (2020). Fentanyl Plasma Concentrations after Application of a Transdermal Patch in Three Different Locations to Refine Postoperative Pain Management in Rabbits. ANIMALS, 10(10). https://doi.org/10.3390/ani10101778

Keywords: analgesia; animal experiment; controlled study; drug blood level; enzyme linked immunosorbent assay; erythema; eye ointment; fentanyl; inner ear; medetomidine; midazolam; New Zealand White (rabbit); Postoperative analgesia; postoperative pain; prospective study; rabbits; Refinement; Transdermal fentanyl patch

Nield, K., & Govendir, M. (2019). Comparison of 0.2 mg/kg vs. 1.0 mg/kg of oral meloxicam for safe and effective analgesia in domestic rabbits. Veterinary Evidence, 4(2). CAB Abstracts. https://doi.org/10.18849/ve.v4i2.215

Keywords: analgaesia; Animal Health and Hygiene (General); animal rights; Animal Welfare; LL800; LL810; LL882; meloxicam; pain killers; pain relief; rabbits; Veterinary Pharmacology and Anaesthesiology

Oguntoye, C. O., & Oke, B. O. (2014). A comparison of xylazine/ketamine, diazepam/ketamine and acepromazine/ketamine anaesthesia in rabbit. Sokoto Journal of Veterinary Sciences, 12(3), 21–25. CAB Abstracts. https://doi.org/10.4314/sokjvs.v12i3.4

Keywords: LL070; LL882; rabbits; Veterinary Pharmacology and Anaesthesiology

Oguntoye, C. O., Oyewande, O. A., & Afolabi, O. O. (2018). Evaluation of tramadol-midazolam-ketamine anaesthesia in rabbits. Nigerian Journal of Physiological Sciences, 33(2), 145–149. Scopus.

Keywords: Anaesthesia; Analgesia; Anesthetics; Body Temperature; drug effect; Heart Rate; ketamine; Leporidae; midazolam; pain; Pain; physiology; Rabbits; Tramadol; Xylazine

Palkovic, B., Callison, J., Marchenko, V., Stuth, E., Zuperku, E., & Stucke, A. (2021). Endogenous Opioid Receptor Activation in the Caudal Medullary Raphe Depresses Respiratory Rate in Decerebrate Rabbits. FASEB JOURNAL, 35. https://doi.org/10.1096/fasebj.2021.35.S1.02380

Keywords: Opioid; Rabbits

Parmen, V. (2014). Electroacupuncture Analgesia in a Rabbit Ovariohysterectomy. Journal of Acupuncture & Meridian Studies, 7(1), 15–24. https://doi.org/10.1016/j.jams.2013.05.004

Keywords: abdominal wall; Acupuncture Analgesia; Acupuncture Analgesia/adverse effects/instrumentation/methods; analgesia; animal experiment; clinical research; controlled study;

electroacupuncture; Electroacupuncture; Electroacupuncture analgesia; Electroacupuncture/adverse effects/instrumentation/methods; homeostasis; Hysterectomy; Hysterectomy/methods; Neuroleptanalgesia; New Zealand white (rabbit); operation duration; Ovariectomy; Ovariectomy/methods; Ovariohysterectomy; postoperative analgesia; Postoperative Complications; rabbits; Research Design; stimulation; thermoregulation; veterinary clinic

Parmen, V., Pestean, C., Ober, C., Mircean, M., & Oana, L. (2015). Paraclinical Investigations of Electroacupuncture Analgesia in a Rabbit Ovariohysterectomy. Journal of Acupuncture & Meridian Studies, 8(1), 44–47. https://doi.org/10.1016/j.jams.2014.04.007

Keywords: Acupuncture Analgesia; Electroacupuncture; Pain Management; adrenocorticotropic hormone (ACTH); Adrenocorticotropic hormone (ACTH); Adrenocorticotropic Hormone/blood; analgesia; animal experiment; animal model; blood sampling; corticotropin; cortisol; Cortisol; electroacupuncture; electroacupuncture analgesia (EAA); Electroacupuncture analgesia (EAA); experimental rabbit; glucose blood level; Glucose/metabolism; glycemia; Glycemia; hydrocortisone; hydrocortisone blood level; Hydrocortisone/blood; hypothalamus hypophysis adrenal system; hysterectomy; operation duration; Ovariectomy; Ovariohysterectomy; Ovary/surgery; Pituitary-Adrenal System/metabolism; Rabbits; stress

Parmen, V., Pestean, C., Ober, C., Mircean, M., Ognean, L., & Oana, L. (2014). Influence of electroacupuncture on thermal changes in a soft tissue defect. Journal of Acupuncture and Meridian Studies, 7(5), 238–242. https://doi.org/10.1016/j.jams.2014.01.002

Keywords: Electroacupuncture (EA); Needles; neuroleptanalgesia (NLA); rabbits; Skin Temperature/radiation effects; Skin/injuries; thermal changes; tissue defect; Vasoconstriction/radiation effects

Parmen, V., Taulescu, M., Ober, C., Pestean, C., & Oana, L. (2014). Influence of electroacupuncture on the soft tissue healing process. Journal of Acupuncture and Meridian Studies, 7(5), 243–249. https://doi.org/10.1016/j.jams.2014.03.003

Keywords: Electroacupuncture (EA); healing process; Inflammation/therapy; Neuroleptanalgesia; rabbits; Skin/injuries/pathology/radiation effects; soft tissue; Wound Healing/radiation effects

Pinho, R. H., Leach, M. C., Minto, B. W., Rocha, F. D. L., & Loureiro Luna, S. P. (2020). Postoperative pain behaviours in rabbits following orthopaedic surgery and effect of observer presence. PLOS ONE, 15(10). https://doi.org/10.1371/journal.pone.0240605

Keywords: Analgesia/methods; Disease Models, Animal; Orthopedic Procedures/adverse effects; Orthopedics/trends; Pain Management/methods; Pain Measurement/methods; Pain, Postoperative/diagnosis/drug therapy/physiopathology; Rabbits; Pain, Postoperative/drug therapy; Pain, Postoperative/diagnosis; Pain, Postoperative/physiopathology

Raillard, M., Detotto, C., Grepper, S., Beslac, O., Fujioka-Kobayashi, M., Schaller, B., & Saulacic, N. (2019). Anaesthetic and Perioperative Management of 14 Male New Zealand White Rabbits for Calvarial Bone Surgery. ANIMALS, 9(11). https://doi.org/10.3390/ani9110896

Keywords: airway obstruction; Anaesthesia; Analgesia; anesthetic agent; animal experiment; arterial gas; arterial partial pressure of carbon dioxide; arterial partial pressure of oxygen; blood pressure monitoring; blood sampling; bone defect; buprenorphine; calvaria; Calvarial bone;

capnometry; controlled study; Craniotomy; dexmedetomidine; duplocillin; end tidal carbon dioxide tension; esconarkon; grimace scale; isoflurane; ketamine; lidocaine; mean arterial pressure; meloxicam; New Zealand White (rabbit); operation duration; orthopedic surgery; Pain; pain assessment; Pain score; pentobarbital; perioperative period; postoperative analgesia; postoperative pain; pulse oximetry; pulse rate; Rabbit grimace; Rabbits; rectal temperature; respiration control; respiratory tract parameters; V-gel®; water temperature; xylazine

Sarwar, M. S., Kalhoro, A. B., Khan, H., Kausarzeb, Hayat, S., Aziz, T., Jan, S. A., Ali, S., & Khan, T. (2014). Sedative and Analgesic Effects of Xylazine in Rabbits. PAKISTAN JOURNAL OF ZOOLOGY, 46(5), 1461–1464.

Keywords: Analgesia; body mass; body temperature; Dose response; drug; experimental study; Oryctolagus cuniculus; Physiological effects; rabbits; rodent; saliva; Sedation; skin; Xylazine

Shi, X., Yu, W., Wang, T., Battulga, O., Wang, C., Shu, Q., Yang, X., Liu, C., & Guo, C. (2020). Electroacupuncture alleviates cartilage degradation: Improvement in cartilage biomechanics via pain relief and potentiation of muscle function in a rabbit model of knee osteoarthritis. BIOMEDICINE & PHARMACOTHERAPY, 123. https://doi.org/10.1016/j.biopha.2019.109724

Keywords: Acupuncture Therapy; Electroacupuncture; Pain Management; acupuncture; acupuncture point; Acupuncture Therapy; analgesiaanimal cell; animal experiment; animal model; animal tissuearthralgia; articular cartilage; biceps femoris muscle; Biomechanical Phenomena; biomechanics; cartilage degeneration; cartilage matrix; Cartilage viscoelasticity; Cartilage, Articular; Cartilage, Articular/pathology; celecoxib; chondrocyte; collagen type 2; controlled study; electroacupuncture; Electroacupuncture; flexor muscle; gait; hindlimb; immobilization; inflammation; Inflammation; Inflammation/metabolism; joint function; joint swelling; knee function; knee osteoarthritis; Knee osteoarthritis; knee pain; Leporidae; metabolism; muscle atrophy; muscle function; Muscle modulus of elasticity; nuclear size; Osteoarthritis, Knee; Osteoarthritis, Knee/therapy; pain; Pain; Pain Management; Pain/etiology; pathology; rabbit model; Rabbits; Type II collagen; viscoelasticity

Stucke, A. G., Miller, J. R., Prkic, I., Zuperku, E. J., Hopp, F. A., & Stuth, E. A. E. (2015). Opioid-induced Respiratory Depression Is Only Partially Mediated by the preBotzinger Complex in Young and Adult Rabbits In Vivo. ANESTHESIOLOGY, 122(6), 1288–1298. https://doi.org/10.1097/ALN.0000000000000628

Keywords: Aging; Analgesics, Opioid; analogs and derivatives; animal experiment; animal model; artificial ventilation; breathing pattern; breathing rate; chemically induced; Conference Paper; controlled study; Enkephalin, Ala(2)-MePhe(4)-Gly(5)-; enkephalin[2 dextro alanine 4 methylphenylalanine 5 glycine]; homocysteic acid; homocysteine; Homocysteine; in vivo study; metabolism; naloxone; Naloxone; narcotic analgesic agent; narcotic antagonist; Narcotic Antagonists; nerve cell; Neurons; New Zealand White (rabbit); opiate; pathophysiology; physiology; prebotzinger complex; rabbits; remifentanil; respiration depression; respiratory failure; Respiratory Insufficiency; respiratory nerve cell

Stucke, A. G., Zuperku, E. J., Prkic, I., Hopp, F. A., & Stuth, E. A. E. (2013). The PreBotzinger Complex (preBC) Partially Mediates Opioid-Induced Respiratory Depression in Young but not in Adult Rabbits. FASEB JOURNAL, 27.

Keywords: analgesia; Sedation; PreBotzinger; Opioid

Stueber, T., Meyer, S., Jangra, A., Hage, A., Eberhardt, M., & Leffler, A. (2018). Activation of the capsaicin-receptor TRPV1 by the acetaminophen metabolite N-arachidonoylaminophenol results in cytotoxicity. Life Sciences, 194, 67–74. https://doi.org/10.1016/j.lfs.2017.12.024

Keywords: Acetaminophen; Acetaminophen/metabolism/pharmacology; AM404; Analgesia; Analgesics, Non-Narcotic/metabolism/pharmacologyArachidonic Acids/metabolism/pharmacology; Benzoquinones/metabolism; Capsaicin/pharmacology; Ganglia, Spinal/cytology/drug effects; HEK293 Cells; Imines/metabolism; Mice, Inbred C57BL; NAPQI; Neurons/drug effects/metabolism; Neurotoxicity; Rabbits; Rats, Sprague-Dawley; Sensory System Agents/pharmacology; TRPV Cation Channels/metabolism; TRPV1

Tomacheuski, R. M., Taffarel, M. O., Ferrante, M., & Luna, S. P. (2020). Preliminary survey of the attitudes of Brazilian scientists towards pain management and assessment in animals used in science. Veterinary Anaesthesia and Analgesia, 47(5), 647–656. https://doi.org/10.1016/j.vaa.2020.05.007

Keywords: Animal Welfare; Laboratory Animal Science; Veterinarians; analgesia; Analgesia/ethics/veterinary; Analgesics; Attitude of Health Personnel; laboratory animals; Pain Management/ethics/veterinary; pain measurement; Pain Measurement/ethics/veterinary; Pain/drug therapy/veterinary; Prospective Studies; rats; survey; Surveys and Questionnaires

Touzot-Jourde, G., Nino, V., & Holopherne-Doran, D. (2015). Comparison of methadone and morphine sedation and analgesia in the NZW rabbit. JOURNAL OF VETERINARY PHARMACOLOGY AND THERAPEUTICS, 38, 70–71.

Keywords: Analgesia; Morphine; Rabbits

Tutunaru, A. C., Leau, F., Sonea, A., & Sandersen, C. (2013). The use of medetomidine and buprenorphine for premedication, ketamine for induction and isoflurane to maintain general anesthesia in rabbits. Case studies. Scientific Works. Series C. Veterinary Medicine, 59(1), 81–84. Global Health.

Keywords: Animal and in-vitro Models for Pharmaceuticals; Animal Models of Human Diseases; Animal Surgery and Non-drug Therapy; Laboratory Animal Science; Leporidae; LL040; LL860; LL882; LL884; Non-Communicable Diseases and Injuries of Animals; rabbits; Veterinary Pharmacology and Anaesthesiology; VV400; VV450

Ura, K., Sudo, H., Iwasaki, K., Tsujimoto, T., Ukeba, D., & Iwasaki, N. (2019). Effects of Intradiscal Injection of Local Anesthetics on Intervertebral Disc Degeneration in Rabbit Degenerated Intervertebral Disc. JOURNAL OF ORTHOPAEDIC RESEARCH, 37(9), 1963–1971. https://doi.org/10.1002/jor.24347

Keywords: animal model; bupivacaine; cell death; confocal laser scanning microscopy; controlled study; degenerative changes; discoblock; drug efficacy; extracellular matrix; histology; in vivo study; intervertebral disk degeneration; Leporidae; lidocaine; local anesthetics; organ culture; sodium chloride; TUNEL assay

van der Veeken, L., Inversetti, A., Galgano, A., Bleeser, T., Papastefanou, I., van de Merwe, J., Rex, S., & Deprest, J. (2021). Fetally-injected drugs for immobilization and analgesia do not

modify fetal brain development in a rabbit model. Prenatal Diagnosis, 41(9), 1164–1170. Scopus. https://doi.org/10.1002/pd.5954

Keywords: Analgesia; Rabbit; Fetus

Varga, M. (2015). Safe rabbit anaesthesia/analgesia. 364. CAB Abstracts. https://search.ebscohost.com/login.aspx?direct=true&db=lah&AN=20153247952&site=ehost-live

Keywords: LL882; rabbits; Veterinary Pharmacology and Anaesthesiology

Wenger, S. (2012). ANESTHESIA AND ANALGESIA IN RABBITS AND RODENTS. JOURNAL OF EXOTIC PET MEDICINE, 21(1), 7–16. https://doi.org/10.1053/j.jepm.2011.11.010

Keywords: Anesthesia; Canis familiaris; Lagomorphs; Monitoring; Oryctolagus cuniculus; Pain management; Perioperative care; Rodentia; Rodents; inflammatory drugs; Canidae; cats; dogs; exotic pets; Felidae; Fissipeda; Leporidae; LL070; LL882; medicines; NSAIDS; pain killers; pharmaceuticals; rabbits; rodents; surveillance systems; Veterinary Pharmacology and Anaesthesiology; veterinary surgeons

Yang, H., Luo, H., & Li, Y.-H. (2019). Effects of epidural infusion of morphine combined with small-dose naloxone on gastrointestinal interstitial cells of Cajal in rabbits. EUROPEAN REVIEW FOR MEDICAL AND PHARMACOLOGICAL SCIENCES, 23(6), 2596–2601. https://doi.org/10.26355/eurrev_201903_17409

Keywords: adverse event; Analgesia, Epidural; Analgesia, Epidural/adverse effects; analgesic activityanimal cell; animal experiment; animal model; cell count; cell motion; Cell Movement; constipation; continuous infusion; controlled study; cytology; down regulation; drug effect; epidural analgesia; Epidural infusion; Gastrointestinal interstitial cells of Cajal in rabbits; gastrointestinal motility; Interstitial Cells of Cajal; Interstitial Cells of Cajal/cytology/drug effects/metabolism; Leporidae; metabolism; Morphine; Morphine/administration & dosage/adverse effects/pharmacology; Naloxone; Naloxone/administration & dosage/adverse effects/pharmacology; New Zealand rabbit; Pain Measurement; Pain Measurement/drug effects; Rabbits; risk reduction; Small-dose naloxone; visual analog scale

Zeeland, Y. van, & Schoemaker, N. (2014). Current anaesthetic considerations and techniques in rabbits. Part I: Pre-anaesthetic considerations and commonly used analgesics and anaesthetics. European Journal of Companion Animal Practice, 24(4), 19–30. CAB Abstracts.

Keywords: administration routes; anesthesia; anesthetics; Animal Health and Hygiene (General); animal health products; CC700; death rate; hypovolemia; Leporidae; LL070; LL800; LL882; preanesthetic medication; Professions: Practice and Service; rabbits; rehydration therapy; Techniques and Methodology; Veterinary Pharmacology and Anaesthesiology; ZZ900

Eastern Medicine: Acupuncture/Electroacupuncture

25 Citations

Ding, N., Wei, Q., Deng, W., Sun, X., Zhang, J., & Gao, W. (2021). Electroacupuncture Alleviates Inflammation of Dry Eye Diseases by Regulating the α7nAChR/NF-κB Signaling Pathway. Oxidative Medicine and Cellular Longevity, 2021, 6673610. https://doi.org/10.1155/2021/6673610

Keywords: Dry Eye Syndromes/therapy; Electroacupuncture/methods; Inflammation/therapy; NF-kappa B/metabolism; Rabbits; Signal Transduction

Dong, S.-A., Gong, L.-R., Yu, J.-B., & Kan, Y.-X. (2020). The Role of Melatonin in Electroacupuncture Alleviating Lung Injury Induced by Limb Ischemia-Reperfusion in Rabbits. Medical Science Monitor : International Medical Journal of Experimental and Clinical Research, 26, e922525. https://doi.org/10.12659/MSM.922525

Keywords: Disease Models, Animal; Electroacupuncture/methods; Lung Injury/therapy; Melatonin/metabolism/pharmacology; Rabbits; Reperfusion; Reperfusion Injury/metabolism/therapy; Tumor Necrosis Factor-alpha/metabolism

Gong, L.-R., Kan, Y.-X., Lian, Y., Dong, S.-A., Zhao, D.-H., Shi, J., & Yu, J.-B. (2020). Electroacupuncture Attenuates Limb Ischemia-Reperfusion-Induced Lung Injury Via p38 Mitogen-Activated Protein Kinase-Nuclear Factor Erythroid-2-Related Factor-2/Heme Oxygenase Pathway. The Journal of Surgical Research, 246, 170–181. https://doi.org/10.1016/j.jss.2019.08.021

Keywords: Electroacupuncture; Ischemia; Lung injury; p38 MAPK pathway; Reperfusion; Acute Lung Injury/immunology/pathology/prevention & control; Disease Models, Animal; Extremities/blood supply; Femoral Artery/surgery; Heme Oxygenase-1/metabolism; Imidazoles/pharmacology; Inflammation Mediators/immunology/metabolism; MAP Kinase Signaling System/drug effects/immunology; NF-E2-Related Factor 2/metabolism; Oxidative Stress/drug effects/immunology; p38 Mitogen-Activated Protein Kinases/antagonists & inhibitors/metabolism; Pyridines/pharmacology; Rabbits; Reperfusion Injury/complications/immunology/therapy; Treatment Outcome

He, J., Yang, L., Qing, Y., & He, C. (2014). Effects of electroacupuncture on bone mineral density, oestradiol level and osteoprotegerin ligand expression in ovariectomised rabbits. Acupuncture in Medicine : Journal of the British Medical Acupuncture Society, 32(1), 37–42. https://doi.org/10.1136/acupmed-2012-010271

Keywords: Bone Density; Electroacupuncture; Acupuncture; Estradiol/metabolism; Osteoporosis Arthritis; Osteoporosis, Postmenopausal/genetics/metabolism/physiopathology/therapy; Ovariectomy/adverse effects; Rabbits; RANK Ligand/genetics/metabolism; Therapeutics

Hsieh, Y.-L., Hong, C.-Z., Liu, S.-Y., Chou, L.-W., & Yang, C.-C. (2016). Acupuncture at distant myofascial trigger spots enhances endogenous opioids in rabbits: A possible mechanism for managing myofascial pain. Acupuncture in Medicine : Journal of the British Medical Acupuncture Society, 34(4), 302–309. MEDLINE. https://doi.org/10.1136/acupmed-2015-011026

Keywords: ACUPUNCTURE; Acupuncture Points; Acupuncture Therapy; beta-Endorphin/metabolism; beta-Endorphin/blood; beta-Endorphin/cerebrospinal fluid; Enkephalins/metabolism; Enkephalins/blood; Enkephalins/cerebrospinal fluid; Facial

Pain/therapy; Ganglia, Spinal/metabolism; Muscle, Skeletal/metabolism; MYOFASCIAL PAIN; Pain Management; PAIN RESEARCH; Rabbits; Trigger Points

Li, P., & Tjen-A-Looi, S. C. (2013). Mechanism of the inhibitory effect of electroacupuncture on experimental arrhythmias. Journal of Acupuncture and Meridian Studies, 6(2), 69–81. https://doi.org/10.1016/j.jams.2012.11.001

Keywords: Electroacupuncture; Arrhythmias, Cardiac/physiopathology/prevention & control/therapy; Rabbits

Li, X.-H., Liu, N.-G., Guo, C.-Q., Sun, H.-M., Wu, H.-X., Xu, H., & Zhang, Y. (2015). Effects of acupotomylysis on basic fibroblast growth factor and CD34 levels in rabbits with third lumbar vertebral transverse foramen syndrome. Genetics and Molecular Research : GMR, 14(3), 9739–9744. https://doi.org/10.4238/2015.August.19.6

Keywords: ElectroacupunctureAntigens, CD34/metabolism; Back Muscles/blood supply/metabolism; Fibroblast Growth Factor 2/metabolism; Lumbar Vertebrae/pathology; Neovascularization, Physiologic; Rabbits; Syndrome

Liu, L.-Y. (2015). A New Type of Signaling Pathways as Pilomotor Lines along Skin for Transmitting Acupuncture Signals to Produce Acupuncture Effects. The Chinese Journal of Physiology, 58(3), 165–177. https://doi.org/10.4077/CJP.2015.BAD290

Keywords: Acupuncture Analgesia; Meridians; Catecholamines/metabolism; Medicine, Chinese Traditional; Muscle, Skeletal/innervation; Pain Threshold; Phenylephrine/pharmacology; Rats; Rats, Wistar; Signal Transduction/physiology

Liu, S., Wang, R., Luo, D., Xu, Q., Xiao, C., Lin, P., Yu, Z., Zhao, X., Cai, R., Ma, J., Zhang, Q., & Wang, Y. (2015). Effects of electroacupuncture on recovery of the electrophysiological properties of the rabbit gastrocnemius after contusion: An in vivo animal study. BMC Complementary and Alternative Medicine, 15, 69. https://doi.org/10.1186/s12906-015-0601-z

Keywords: Acupuncture Points; Electrophysiological Phenomena; Acetylcholinesterase/metabolism; Agrin/metabolism; Contusions/drug therapy/metabolism/physiopathology; Electroacupuncture/methods; Electromyography; Muscle, Skeletal/physiology; Neuromuscular Junction/metabolism; Rabbits

Parmen, V. (2014). Electroacupuncture Analgesia in a Rabbit Ovariohysterectomy. Journal of Acupuncture & Meridian Studies, 7(1), 15–24. https://doi.org/10.1016/j.jams.2013.05.004

Keywords: abdominal wall; Acupuncture Analgesia; Acupuncture Analgesia/adverse effects/instrumentation/methods; analgesia; animal experiment; clinical research; controlled study; electroacupuncture; Electroacupuncture; electroacupuncture analgesia; Electroacupuncture analgesia; Electroacupuncture/adverse effects/instrumentation/methods; homeostasis; Hysterectomy; Hysterectomy/methods; neuroleptanalgesia; Neuroleptanalgesia; New Zealand white (rabbit); operation duration; Ovariectomy; Ovariectomy/methods; Ovariohysterectomy; postoperative analgesia; Postoperative Complications; rabbits; Research Design; stimulation; thermoregulation; veterinary clinic

Parmen, V., Pestean, C., Ober, C., Mircean, M., & Oana, L. (2015). Paraclinical Investigations of Electroacupuncture Analgesia in a Rabbit Ovariohysterectomy. Journal of Acupuncture & Meridian Studies, 8(1), 44–47. https://doi.org/10.1016/j.jams.2014.04.007

Keywords: Acupuncture Analgesia; Electroacupuncture; Pain Management; Adrenocorticotropic hormone (ACTH); Adrenocorticotropic Hormone/blood; analgesia; animal experiment; animal model; blood sampling; corticotropin; Cortisol; Electroacupuncture analgesia (EAA); experimental rabbit; glucose blood level; Glucose/metabolism; glycemia; Glycemia; hydrocortisone; hydrocortisone blood level; Hydrocortisone/blood; hypothalamus hypophysis adrenal system; hysterectomy; operation duration; Ovariectomy; Ovariohysterectomy; Ovary/surgery; Pituitary-Adrenal System/metabolism; Rabbits; stress

Parmen, V., Pestean, C., Ober, C., Mircean, M., Ognean, L., & Oana, L. (2014). Influence of electroacupuncture on thermal changes in a soft tissue defect. Journal of Acupuncture and Meridian Studies, 7(5), 238–242. https://doi.org/10.1016/j.jams.2014.01.002

Keywords: Electroacupuncture (EA); Needles; Neuroleptanalgesia (NLA); rabbits; Skin Temperature/radiation effects; Skin/injuries; thermal changes; tissue defect; Vasoconstriction/radiation effects

Parmen, V., Taulescu, M., Ober, C., Pestean, C., & Oana, L. (2014). Influence of electroacupuncture on the soft tissue healing process. Journal of Acupuncture and Meridian Studies, 7(5), 243–249. https://doi.org/10.1016/j.jams.2014.03.003

Keywords: Electroacupuncture (EA); healing process; Inflammation/therapy; Neuroleptanalgesia; rabbits; Skin/injuries/pathology/radiation effects; soft tissue; Wound Healing/radiation effects

Qin, Y., He, J., Xia, L., Guo, H., & He, C. (2013). Effects of electro-acupuncture on oestrogen levels, body weight, articular cartilage histology and MMP-13 expression in ovariectomised rabbits. Acupuncture in Medicine : Journal of the British Medical Acupuncture Society, 31(2), 214–221. https://doi.org/10.1136/acupmed-2012-010289

Keywords: Body Weight; Cartilage, Articular/metabolism; Disease Models, Animal; Electroacupuncture/methods; Estrogens/metabolism; Matrix Metalloproteinase 13/metabolism; Osteoarthritis/metabolism/therapy; Ovariectomy; Rabbits; Random Allocation

Redington, K. L., Disenhouse, T., Li, J., Wei, C., Dai, X., Gladstone, R., Manlhiot, C., & Redington, A. N. (2013). Electroacupuncture reduces myocardial infarct size and improves post-ischemic recovery by invoking release of humoral, dialyzable, cardioprotective factors. The Journal of Physiological Sciences : JPS, 63(3), 219–223. https://doi.org/10.1007/s12576-013-0259-6

Keywords: Electroacupuncture; Cardiotonic Agents/blood; Dialysis; Hindlimb/blood supply; In Vitro Techniques; Ischemia; Ischemic Preconditioning, Myocardial/methods; Myocardial Infarction/prevention & control; Myocardial Reperfusion Injury/prevention & control; Perfusion; Rabbits; Reperfusion Injury

Renfu, Q., Rongliang, C., Mengxuan, D., Liang, Z., Jinwei, X., Zongbao, Y., & Disheng, Y. (2014). Anti-apoptotic signal transduction mechanism of electroacupuncture in acute spinal cord injury. Acupuncture in Medicine : Journal of the British Medical Acupuncture Society, 32(6), 463–471. https://doi.org/10.1136/acupmed-2014-010526

Keywords: Apoptosis; Electroacupuncture; MAP Kinase Signaling System; ACUPUNCTURE; Caspase 3/metabolism; Chromones/pharmacology; Cytochromes c/metabolism; Flavonoids/pharmacology; Mitogen-Activated Protein Kinase 1/metabolism; Mitogen-Activated Protein Kinase 3/metabolism; Morpholines/pharmacology; Protein Kinase Inhibitors/pharmacology; Proto-Oncogene Proteins c-akt/metabolism; Rabbits; Random

Allocation; Signal Transduction; Spinal Cord Injuries/metabolism/therapy; Spinal Cord/cytology/metabolism

Shi, X., Yu, W., Wang, T., Battulga, O., Wang, C., Shu, Q., Yang, X., Liu, C., & Guo, C. (2020). Electroacupuncture alleviates cartilage degradation: Improvement in cartilage biomechanics via pain relief and potentiation of muscle function in a rabbit model of knee osteoarthritis. BIOMEDICINE & PHARMACOTHERAPY, 123. https://doi.org/10.1016/j.biopha.2019.109724

Keywords: Acupuncture Therapy; Pain Management; acupuncture; acupuncture point; analgesiaanimal cell; animal experiment; animal model; animal tissuearthralgia; articular cartilage; biceps femoris muscle; Biomechanical Phenomena; biomechanics; cartilage degeneration; cartilage matrix; Cartilage viscoelasticity; Cartilage, Articular; Cartilage, Articular/pathology; celecoxib; chondrocyte; collagen type 2; controlled study; Electroacupuncture; flexor muscle; gait; hindlimb; immobilization; Inflammation; Inflammation/metabolism; joint function; joint swelling; knee function; Knee osteoarthritis; knee pain; Leporidae; metabolism; muscle atrophy; muscle function; Muscle modulus of elasticity; nuclear size; Osteoarthritis, Knee; Osteoarthritis, Knee/therapy; Pain; Pain Management; Pain/etiology; pathology; rabbit model; Rabbits; Type II collagen; viscoelasticity

Sun, Y., Wu, Y., Zhang, J., Zhang, P., & Tang, Z. (2013). Effects of electroacupuncture on muscle state and electrophysiological changes in rabbits with lumbar nerve root compression. Chinese Journal of Integrative Medicine, 19(6), 446–452. https://doi.org/10.1007/s11655-013-1340-3

Keywords: Electroacupuncture; Electrophysiological Phenomena; Electromyography; Evoked Potentials/physiology; Lumbar Vertebrae/physiopathology; Motor Neurons/physiology; Muscles/physiopathology; Neural Conduction/physiology; Rabbits; Radiculopathy/physiopathology/therapy

Wu, G.-W., Chen, J., Huang, Y.-M., Pan, C.-B., Chen, W.-L., Zhang, S.-M., Lin, W., Liu, X.-X., & Wu, M.-X. (2019). Electroacupuncture Delays Cartilage Degeneration by Modulating Nuclear Factor-κB Signaling Pathway. Chinese Journal of Integrative Medicine, 25(9), 677–683. https://doi.org/10.1007/s11655-018-2916-8

Keywords: Electroacupuncture; Signal Transductioncartilage; Cartilage, Articular/pathology; Chondrocytes/pathology/ultrastructure; cytokines; electroacupuncture; I-kappa B Kinase/metabolism; Interleukin-1beta/metabolism; Interleukin-6/metabolism; Matrix Metalloproteinase 3/metabolism; NF-kappa B/metabolism; NF-KappaB Inhibitor alpha/metabolism; nuclear factor-κB signaling pathway; osteoarthritis; Rabbits; synovial fluid; Synovial Fluid/metabolism; Transcription Factor RelA/metabolism; Tumor Necrosis Factor-alpha/metabolism

Yu, J., Shi, J., Gong, L., Dong, S., Xu, Y., Zhang, Y., Cao, X., & Wu, L. (2014). Role of Nrf2/ARE pathway in protective effect of electroacupuncture against endotoxic shock-induced acute lung injury in rabbits. PloS One, 9(8), e104924. https://doi.org/10.1371/journal.pone.0104924

Keywords: Antioxidant Response Elements; Electroacupuncture; Acute Lung Injury/etiology/physiopathology/prevention & control; Disease Models, Animal; Heme Oxygenase-1/metabolism; Interleukin-6/blood; Lung/pathology/physiopathology; Malondialdehyde/metabolism; NF-E2-Related Factor 2/genetics/metabolism; Rabbits; RNA, Messenger/genetics/metabolism; Shock, Septic/complications/physiopathology/therapy; Signal Transduction; Superoxide Dismutase/metabolism; Tumor Necrosis Factor-alpha/blood

Yu, J.-B., Shi, J., Zhang, Y., Gong, L.-R., Dong, S.-A., Cao, X.-S., Wu, L.-L., & Wu, L.-N. (2015). Electroacupuncture Ameliorates Acute Renal Injury in Lipopolysaccharide-Stimulated Rabbits via Induction of HO-1 through the PI3K/Akt/Nrf2 Pathways. PloS One, 10(11), e0141622. https://doi.org/10.1371/journal.pone.0141622

Keywords: Acute Kidney Injury/etiology/metabolism/prevention & control; Cell Line; Disease Models, Animal; Electroacupuncture/methods; Heme Oxygenase-1/metabolism; Lipopolysaccharides/adverse effects; NF-E2-Related Factor 2/metabolism; Oxidative Stress; Phosphatidylinositol 3-Kinases/metabolism; Rabbits; Signal Transduction; Up-Regulation

Zhang, W., Gao, Y., Guo, C., Ibrahim Zeyad Ali, K., & Farid, M. (2019). Effect of acupotomy versus electroacupuncture on ethology and morphology in a rabbit model of knee osteoarthritis. Journal of Traditional Chinese Medicine = Chung i Tsa Chih Ying Wen Pan, 39(2), 229–236.

Keywords: Acupuncture Therapy; Electroacupuncture; Ethology; Morphological and microscopic findings; Osteoarthritis, knee; Cartilage/pathology; Disease Models, Animal; Gait; Osteoarthritis, Knee/pathology/physiopathology/therapy; Rabbits

Zhang, Y., Yu, J.-B., Luo, X.-Q., Gong, L.-R., Wang, M., Cao, X.-S., Dong, S.-A., Yan, Y.-M., Kwon, Y., & He, J. (2014). Effect of ERK1/2 signaling pathway in electro-acupuncture mediated up-regulation of heme oxygenase-1 in lungs of rabbits with endotoxic shock. Medical Science Monitor : International Medical Journal of Experimental and Clinical Research, 20, 1452–1460. https://doi.org/10.12659/MSM.890736

Keywords: Analysis of Variance; Blotting, Western; DNA Primers; Electroacupuncture/methods; Gene Expression Regulation, Enzymologic/physiology; Heme Oxygenase-1/metabolism; Histological Techniques; Lipopolysaccharides/adverse effects; Lung/enzymology/pathology; MAP Kinase Signaling System/physiology; Polymerase Chain Reaction; Rabbits; Shock, Septic/chemically induced/therapy; Superoxide Dismutase/blood; Tumor Necrosis Factor-alpha/blood

Zhou, W., Ko, Y., Benharash, P., Yamakawa, K., Patel, S., Ajijola, O. A., & Mahajan, A. (2012). Cardioprotection of electroacupuncture against myocardial ischemia-reperfusion injury by modulation of cardiac norepinephrine release. American Journal of Physiology. Heart and Circulatory Physiology, 302(9), H1818-1825. https://doi.org/10.1152/ajpheart.00030.2012

Keywords: Electroacupuncture; Arrhythmias, Cardiac/prevention & control; Benzophenanthridines/pharmacology; Models, Animal; Myocardial Infarction/pathology; Myocardial Reperfusion Injury/metabolism/pathology/prevention & control; Myocardium/metabolism; Naloxone/pharmacology; Narcotic Antagonists; Norepinephrine/metabolism; Oxygen/metabolism; Protein Kinase C/antagonists & inhibitors; Rabbits; Signal Transduction/drug effects/physiology; Sympathetic Nervous System/physiology; Ventricular Function, Left/physiology

Zhu, H., Wang, X., Huang, M., Jing, Y., Zhang, D., & Ding, G. (2017). Mast cell activation in the acupoint is important for the electroacupuncture effect against pituitrin-induced bradycardia in rabbits. Scientific Reports, 7(1), 9040. https://doi.org/10.1038/s41598-017-08855-5

Keywords: Acupuncture Points; Blood Pressure; Bradycardia/diagnosis/etiology/physiopathology/therapy; Cell Count; Cell Degranulation/immunology; Disease Models, Animal; Electroacupuncture; Electrocardiography; Heart Rate; Mast Cells/immunology/metabolism/pathology; Pituitary Hormones, Posterior/adverse effects; Rabbits