

HEDGEHOG ESSENTIAL VETERINARY CARE GUIDE



European hedgehogs (*Erinaceus europaeus*) were once widespread across Europe, but habitat loss, human activity and pesticide use have resulted in a **30% decline** in population numbers in the last decade.

As of 2024, European hedgehogs are listed on the IUCN Red List as 'near threatened'. The veterinary profession is in a privileged position of being the first point of contact for wild hedgehogs in need of veterinary care or rehabilitation, and this document is designed to help us provide them with the best care possible to improve their welfare and to help preserve the species.



KEY FACTS

- Hedgehogs primarily eat invertebrates, but are opportunistic omnivores
- Litters are born from March to October in nests constructed from vegetation
- Hibernation takes place between November and March. Individuals must have a minimum bodyweight of 600g to have sufficient energy reserves to survive hibernation over winter
- Individuals too small to hibernate should be looked after over winter months at an experienced rehabilitation facility, rather than released, as food is scarce and the risk of mortality is high
- Individuals can be released during mild weather spells if over 600g in weight
- Signs of illness include: inability to curl up into a ball, daytime rather than nocturnal activity (often indicating injury, disease, or food shortage - with the exception of pregnant/nursing mothers foraging for food), ataxia, emaciation or overt injury
- Hedgehogs are prone to endo- and ecto- parasites; they do not need to be routinely treated unless they are clinically unwell (losing weight, abnormal stools, respiratory noises)
- A heavy burden of ectoparasites can be a sign of illness or inability to clean themselves



HUSBANDRY

Clinical Parameters	Short-Term Housing Requirements	Diet
Heart rate: 200 - 280 beats/ min Respiratory rate: 20 - 25 breaths/ min Body temperature: 33.5°C - 36.8°C Body weight: adult 800 - 1600g Lifespan: up to 8 years, average 2 years Weaning age: 5-6 weeks Appearance of droppings: brown and well-formed Maintenance fluid requirements: 50 - 100ml/kg/24hrs - spread requirement over 4 - 5 boluses a day	Large cage/kennel ideally Burying material- shredded paper/ newspaper/ shavings Hiding house or tea towel to bury under and conserve heat Safe covered heat source until we know they are healthy	Meaty cat food pouches, tinned dog meat, complete kibble, Hills A/D or equivalent (dried mealworms do not have any nutritional value and can be detrimental in excess) Watered down Hills A/D or equivalent can be syringe fed to weaned hoglets Un-weaned hoglets require syringe-feeding with milk replacer until able to eat for themselves Water in a shallow bowl No milk! Avoid a fish based diet (although some wild hedgehogs do eat fish)



FIRST AID

- On initial presentation to the clinic, document the finder's details (in case release is required) take a detailed history, and sign the hedgehog over to the practice
- Gloves should be worn when handling hedgehogs given the risk of zoonoses (they can be asymptomatic carriers of ringworm *T. erinacei*)
- FIRST PRIORITIES: address hypothermia, correct dehydration with warmed subcutaneous fluid administration and measure body weight
- Treatment other than analgesia should not be commenced until hypothermia, dehydration and shock have been corrected.
- Observe breathing pattern, signs of nasal discharge, gait, body condition (thin hedgehogs have sunken flanks) and faecal appearance
- Once normothermic and well hydrated, use wheelbarrow restraint to assess for trauma, wounds, skeletal injury, infectious or parasitic disease, flystrike or other illness
- If unable to uncurl, leave under heat and try again later; gaseous anaesthesia should only be used if absolutely necessary or if suspicious of severe injury
- Faecal microscopy can be extremely useful to identify specific endoparasite burdens



COMMON CONDITIONS

CONDITION	TREATMENT
Superficial wounds/ burns	Flush with dilute iodine/ chlorhexidine/ saline. Administer co-amoxiclav and meloxicam. Usually wounds are traumatic so should be left to heal by second intention.
Fractured leg/ osteomyelitis	It is not appropriate to amputate a limb. An open/ abscessed/ complete fracture warrants euthanasia.
Blindness	Complete loss of vision/ bilateral blindness warrants euthanasia.
Fly strike	Remove all maggots under anaesthesia using tweezers/ toothbrush. Administer supportive treatment; SC fluids, meloxicam and ivermectin/ cypermethrin if required. In advanced cases of myiasis, euthanasia may be warranted.
Nasal discharge +/- wheezing or moist cough +/- dark green faeces	Hedgehogs are prone to lungworm (<i>Crenosoma striatum</i> and <i>Capillaria aerophila</i>) and this can be diagnosed on faecal microscopy. Thoracic radiography can be performed to rule out other differentials. Lungworm can be treated with levamisole, ivermectin, or Advocate as a parasiticide, co-amoxiclav or amoxicillin for secondary bacterial infections, and dexamethasone if breathing is severely compromised. They will often cough more during treatment as dead worms are expelled. In very severe dyspnoeic cases euthanasia is appropriate as lung consolidation may have occurred.
Green mucoid loose faeces	This usually indicates endoparasites (commonly intestinal <i>Capillaria spp.</i>) which can be confirmed on faecal microscopy and treated with ivermectin/ levamisole.
Bright green mucoid loose faeces + blood / pus (especially in juveniles) * BARRIER NURSE*	Blood or pus in faeces can indicate enteric infection e.g. Salmonellosis or abscessation. Salmonella is endemic in hedgehog populations with many symptomless carriers, but can be fatal if animals are immunocompromised, causing anorexia, diarrhoea, weight loss +/- vomiting. In some cases supportive care and co-amoxiclav/ amoxicillin will be successful, but this can promote carrier status. Enrofloxacin may be required in severe cases. Euthanasia is sometimes necessary on welfare grounds.
Ringworm (<i>T. erinaceid</i>)	This causes spine loss, alopecia and crusting of the skin. Ringworm rarely spontaneously regresses. Topical enilconazole washes are sufficient for localised lesions, but generalised cases require itraconazole or terbinafine orally.
Severe disability or disease which warrants euthanasia	This includes: <ul style="list-style-type: none">• Pelvic fracture (this could cause obstetric complications)• Fractures which are compound/comminuted/near a joint• Geriatric, emaciated animals who are likely in end-stage disease• Severe dyspnoea in any age of hedgehog (if young, try treatment for lungworm first)• Nasal damage (olfaction is the primary sense which enables foraging for food)• Prolapsed internal organs following trauma• Fractured jaw• Large abdominal mass (likely abscess)



DRUG DOSES *Adapted from BSAVA Manual of Wildlife Casualties 2016, BSAVA and Vale Wildlife Hospital Medication Chart; based on allometric principles*

DRUG	INDICATION	DOSE
Co-amoxiclav (Synulox)	First-line broad spectrum antibiotic; respiratory, enteric and skin infections	30-50 mg/kg SC SID, PO BID
Amoxicillin LA (Betamox LA)	First-line broad spectrum antibiotic; respiratory, enteric and skin infections	50-150 mg/kg SC q24 or q48hrs (depending on formulation)
Co-trimoxazole (paediatric liquid TMPS)	First-line antibiotic; enteric infections, primarily coccidiosis	50 mg/kg PO SID
Enrofloxacin (Baytril)	Second-line antibiotic; severe enteric infections	10-20 mg/kg SC, PO BID
Meloxicam (Loxicom/ Metacam)	NSAID; pain relief and anti-inflammatory purposes	0.5 mg/kg SC, PO SID for up to 3 days
Buprenorphine (Buprilieve)	Opioid analgesia	0.03-0.05mg/kg IM/SC q6hrs
Cypermethrin (F10 spray with insecticide)	Antimicrobial wound spray with pyrethroid insecticide; useful for myiasis and as a fly repellent	Topical application sparingly
Imidacloprid and moxidectin (Advocate)	Parasiticide; treatment for lungworm	0.3 ml/kg spot-on q14d
Ivermectin (Ivomec)	Parasiticide; treatment for mites, flystrike, intestinal parasites. Treatment of choice for <i>Capillaria</i> spp (higher doses may be needed)	0.5 mg/kg SC q7d
Levamisole (Levacide)	Parasiticide; treatment of choice for lungworm	27 mg/kg SC q48hrs for 3 doses
Enilconazole (Imaverol)	Antifungal; topical for localised ringworm	0.2% dilution applied topically q3d for 4-6 doses
Itraconazole (Terbinafine, Itrafungol)	Antifungal; parenteral for generalised ringworm	15 mg/kg PO BID for 2-4 weeks
Dexamethasone (Dexadreson)	Corticosteroid; to reduce lung inflammation associated with lungworm if dyspnoeic	0.15 mg/kg SC, IM

EUTHANASIA TECHNIQUE: Intra-hepatic, intra-cardiac or intravenous pentobarbital injection via the cranial vena cava after deep sedation or gaseous anaesthesia (intra-cardiac injection should only be performed under GA)



HEDGEHOG REHABILITATION

- A list of rehabilitators can be found on the British Hedgehog Preservation Society (BHPS) website or the British Wildlife Rehabilitation Council (BWRC) website
- Establishing links with local wildlife rehab centres and RSPCA Wildlife Centres is hugely beneficial.

PROMOTE HEDGEHOG HABITATS: Take strides to make green spaces at home or at work more inviting for hedgehogs and other wildlife:

- ✓ Avoid strimming and grass cutting at certain times of the year e.g. take part in initiatives such as 'No Mow May'
- ✓ Allow brambles to grow
- ✓ Encourage garden wildlife by wilding small areas
- ✓ Place out hedgehog houses and provide log piles for hedgehogs to nest in
- ✓ Leave areas of long grass to allow wildlife to move around safely
- ✓ Consider adding a bell to cat collars to alert wildlife when cats have access to outside areas



REFERENCES:

- BSAVA Manual of Wildlife Casualties 2016, BSAVA
- BSAVA Small Animal Formulary: Exotics, 10th Edition
- The British Hedgehog Preservation Society (BHPS), accessed via <<https://www.britishhedgehogs.org.uk/>>
- RSPCA Wildlife Rehabilitation: Hedgehogs, accessed via <<https://rspca-brighton.org.uk/wp-content/uploads/2022/05/Hedgehogs.pdf>>