Common Emergencies in Small Rodents, Hedgehogs, and Sugar Gliders

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KEYWORDS

• Rodents • Hedgehogs • Sugar gliders • Emergency • Critical care

KEY POINTS

- Small exotic mammals are prone to a variety of health problems, and require specialized husbandry care to remain healthy.
- Small exotic mammals often present to emergency hospitals in critical condition. Veterinarians should pursue diagnostic workups and initiate supportive care to maximize chances of survival.
- This article provides an overview of common emergencies in small rodents, hedgehogs, and sugar gliders.

INTRODUCTION

Small exotic mammal pets such as rats, mice, hamsters, gerbils, degus, hedgehogs, and sugar gliders are becoming more popular. Many people obtain exotic pets without appropriately researching their husbandry needs. As a result, these animals often suffer from preventable diseases. Veterinary clinicians must know what is "normal" for each species and be familiar with appropriate handling and restraint techniques to examine these patients safely, accurately identify and interpret abnormal examination findings and inappropriate husbandry situations, and provide standard of care. Emergency clinicians should familiarize themselves with the veterinary literature before adding small exotic mammals to their case load (**Box 1**).[1–18]

Patient Evaluation Overview

Small rodents

Small rodents that are commonly kept as pets include rats (*Rattus norvegicus*), mice (*Mus musculus*), gerbils (*Meriones unguiculatus*), Syrian/golden hamsters (*Mesocricetus auratus*), Siberian/dwarf hamsters (*Phodopus sungorus*), Chinese hamsters

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Box 1
Handwashing before handling small exotics

Veterinarians should always wash their hands before and after handling small exotic mammals. This ensures that hands do not smell like a predator species, minimizing stress and risk of bites from the patient, and reduces the risk of the veterinarian contracting a zoonotic disease.

(*Cricetus griseus*), and degus (*Octodon* sp.). All of these species, except for Degus, have 4 continuously growing incisor teeth, and cheek teeth that do not grow after eruption. Degus are hystricomorphs, similar to guinea pigs and chinchillas, and all of their teeth grow continuously. Normal physiologic parameters for these species are listed in **Table 1**, and appropriate phlebotomy, catheterization, and injection sites are listed in **Table 2**.

Because many of these animals are used in laboratory research, a significant body of literature exists documenting their health problems (natural or induced).[19] The reader is encouraged to reference laboratory animal literature when researching handling/diagnostic techniques, diseases, and treatment options for small rodents (**Fig. 1**).

Hedgehogs

African Pygmy Hedgehogs (hedgehogs; *Atelerix albiventris*), are nocturnal insectivores native to central Africa. Their dorsum is covered with smooth spines, which serve as their defense mechanism; hedgehogs who feel threatened will curl up tightly into a ball. Restraint can be challenging in this species. Some individuals may be scruffed (**Fig. 2**), and will unroll in a shallow pan of water, but they often require sedation or general anesthesia for complete examination. Normal physiologic parameters for hedgehogs are listed in **Table 3**, and appropriate phlebotomy, catheterization, and injection sites are listed in **Table 4**.

Sugar gliders

Sugar gliders (*Petaurus breviceps*) are nocturnal marsupials native to New Guinea and Australia. They are arboreal and social, sharing their nests with small groups of adults and young. They have a gliding membrane (patagium) extending between their front feet to their distal hind limbs, and can use this membrane to glide through the air.

Table 1
Normal physiologic parameters of small rodents

Species	Life Span (y)	Average Weight (g)	Rectal Temperature	Heart Rate (bpm)	Respiratory Rate (bpm)
Rats	2–3.5	Males: 270–500 Females: 225–325	100.4°F (38°C)	310–500	70–150
Mice	1–2.5	Males: 20–40 Females: 20–60	99.5°F (37.5°C)	420–700	100–250
Gerbils	2–3	Males: 46–131 Females: 50–55	99.3–102.2°F (37.4–39°C)	260–600	85–160
Hamsters	1.5–2	Males: 87–130 Females: 95–130	97.2–99.5°F (36.2–37.5°C)	300–470	40–110
Degus	7–10	176–315	98.2–99.7°F (36.8–37.6°C)	Not published	Not published

Data from Refs.[1,9]