

# African Hedgehog Husbandry and Nutrition: Housing, Diet, Behavior, Handling

*Drs. Foster & Smith Educational Staff*

The African pygmy hedgehog (*Atelerix albiventris*), or simply the African hedgehog, is becoming increasingly popular as a pet. It is also called the four-toed or white-bellied hedgehog (*albiventris* can be translated as 'white belly'). It should not be confused with the European hedgehog (*Erinaceus europaeus*). Some states and municipalities have restrictions regarding the ownership or breeding of hedgehogs, so before considering one for a pet, check your local regulations.

## Natural environment

The African hedgehog originates from equatorial and central Africa, and is found in a variety of habitats including forests, steppes, and deserts. The African hedgehog is nocturnal and lives in burrows or under rocks, tree roots, or brush piles. It is a member of the Erinaceidae family, which are insectivorous mammals, and it normally travels several miles each night in search of insects, snails, slugs, and earthworms.

## Physical characteristics

The African hedgehog is small, the males weighing approximately 600 grams or 1/4 of a pound, and the females reaching up to 400 grams or 1/5 of a pound, making them slightly larger than pet rats.

The color of African hedgehogs varies from brown to almost black. The spines are short, from 1/4 to almost one inch in length, and are unlike those of porcupines, in that they do not have barbs. The muzzle and abdomen do not have spines. The spines normally lie flat and completely cover the back and sides of the animal. Each spine has a life span of about 18 months, and are shed individually and replaced.

Hedgehogs generally live 4-6 years, but some have been known to live up to 8 years.

## Behavior

When alarmed, a hedgehog will roll into a ball, with his head and limbs tucked in, and his spines pointing outward, resembling a spiny ball. A hedgehog can remain in this position for hours. One should never try to force a hedgehog out of this rolled position. Hedgehogs rarely bite, but if frightened, especially males, may hiss.

An interesting behavior of hedgehogs is called "anting" or "self-anointing." When a hedgehog encounters an unusual or unfamiliar smell, or the presence of new food, she will place the new material in her mouth and start to salivate excessively, creating a foamy saliva. She spits this foam onto herself and spreads it over her quills. The reason for this behavior is unknown.

## Housing

Hedgehogs are best housed singly, although some females may live peacefully in groups, especially if they were raised together. Only one male should be kept in a group, or fighting may occur. If you do not want the hedgehogs to breed, do not house a male with the females. Since hedgehogs are excellent climbers, cages with smooth, high walls are preferred. Hedgehogs are very active and need considerable exercise, so an enclosure of at least 8 square feet per animal is preferred. Hedgehogs should not be kept on exposed wire floors, which can cause injury to the feet. Glass tanks may be used; wood tends to be hard to keep clean. If using a cage with wire sides, the mesh spacing should be one square inch or less.

Bedding material should be non-toxic, low-dust, absorbable, several inches deep, and may consist of aspen shavings, hay, or shredded newspaper. If using a rabbit or ferret cage with wire floors, some suggest old, but clean, carpet or pieces of vellux nylon blankets can be used to cover the wire floor. The carpet or blanket can then be covered with the bedding material. Care should be taken to remove any strings on the carpet or blanket which could be ingested or twist around a limb. Because their oils may be irritating, cedar shavings are not recommended. Cat litter should also be avoided since it tends to stick to the hedgehog. The bedding should be kept dry and changed frequently.

Some hedgehogs can be trained to use a litter box. Pelleted newspaper used in cat litter boxes (e.g.; Yesterday's News) makes an excellent litter. To litter train a hedgehog, place the hedgehog in the litter box after he eats, place the litter box in the part of the cage in which the hedgehog most commonly eliminates, and place all the droppings in the litter box.

A hidebox in the form of a plastic flower pot on its side, a plastic log, or a 4" diameter PVC pipe, should be placed in the cage to provide a private and secure hiding or sleeping place.

A clean water source should be provided in the cage, preferably a water bottle. Heavy crocks should be used as food bowls, and also as a water bowl if the hedgehog will not use a water bottle.

In addition to a cage, hedgehogs also benefit from larger areas in which to run and explore. Some owners allow the hedgehogs to be loose in a supervised and "hedgehog-proofed" room. Others purchase large plastic tubs, such as those to mix cement, or wading pools to use as exercise pens. These must have walls high enough to prevent escape. The pens may include solid or fine plastic mesh exercise wheels, balls designed for hedgehogs, mazes of PVC pipe, and toys such as solid rubber balls, Kongs, and toilet paper tubes. Some hedgehogs appreciate a shallow pan of water in which they can swim.

## Temperature, humidity, and light

The natural environment of hedgehogs is warm, so cage temperatures of 75-85°F should be maintained. African hedgehogs normally do not hibernate. However, if the temperature of the cage becomes too cold (less than 65°F), the hedgehog may become dormant, and more susceptible to disease. Temperatures over 85°F can lead to heat stress. Temperature can best be maintained by placing a cage heater under the cage. Humidity should range from 40-70%.

Hedgehogs are nocturnal and should generally be kept on a 12-hour light/12-hour dark schedule. The timing of the light and dark can be artificially adjusted so the hedgehog is more active when the owner is home.

## Diet

In their natural habitat, hedgehogs eat a variety of insects, worms, small vertebrates, and fruit. This diet needs to be duplicated as closely as possible for pet hedgehogs. Diets should be fairly high in protein (30-50% dry matter) and low in fat (10-20%) since pet hedgehogs tend to become obese. The calcium:phosphorus ratio should be 1.2 - 1.5:1. The diet is formulated for an adult male. Adult females would get slightly less unless they are pregnant or lactating, in which case they may require 2-3 times the amount recommended for adult males. Young hedgehogs may eat up to the adult quantity, depending on stage of life and activity level. The weight and body condition of the hedgehog should be monitored routinely, and the amounts fed, adjusted accordingly.

The best diet to feed a hedgehog is a commercial pelleted diet made specifically for hedgehogs. A typical diet would include:

- 1-2 tablespoons of a commercial hedgehog diet. (If this is not available, use premium food for less active cats. Avoid diets too high in fat.)
- 1-2 teaspoons of moist food such as canned dog or cat food, canned meats, low-fat cottage cheese, cooked egg, or cooked meats. Give this in the evening, when the hedgehog is more likely to eat.
- 1/2 teaspoon of a variety of mixed fruits and vegetables

Small amounts of treats can be given in the form of mealworms, crickets, earthworms, waxworms, and cat treats. To add mental stimulation, hide the treats in the hedgehog's bedding. Do not give milk or raw eggs. Avoid hard foods such as nuts and large pieces of raw carrot that can become lodged in the roof of the mouth between the molars.

Fruits	Vegetables
Apples	Beans
Bananas	Carrots (cooked)
Berries	Dark, leafy greens (e.g., spinach, kale, leaf lettuce)
Grapes	Peas
Pears	Squash
	Tomatoes

## Handling

Many hedgehogs accustomed to people can be handled with bare hands. It is best to handle them gently, in a quiet atmosphere with subdued light, and hold them in cupped hands. For frightened or ill hedgehogs, a pair of light leather or latex rubber gloves can be worn. To pick up a hedgehog, cup it gently in both hands. To coax a hedgehog to unroll:

- Heavily backstroke the spines on the back and rump (this works for some hedgehogs; others resent it).
- Hold the hedgehog with his head down over a towel on a table. When he starts to uncurl, lift his hindquarters up and he will grasp onto the towel on the table with his front feet which should help him stay unrolled.
- Place the hedgehog on his back and patiently wait for him to unroll as he starts to turn over.
- Some hedgehogs will relax and unroll if a gloved hand is slipped beneath the body.
- For veterinary examinations, some hedgehogs may need to be lightly sedated or anesthetized.

Hedgehogs can learn to recognize their owners, and some can be taught some basic commands.

## Reproduction

The sex of a hedgehog can be easily determined by physical examination. The penis in the male is located midway up the abdomen. In contrast, in females the genitals are very close to the anus.

African hedgehog females reach breeding age at 2-6 months and males at 6-8 months. Females should be at least 6 months old before they are bred so they have attained adequate growth. Breeding can take place year-round. The gestation period is 32-37 days, with a litter size of 1-7, with an average of 3. Prior to giving birth, the female should be housed separately. If she is stressed, she may cannibalize the young, or cage mates may do the same. It is best to leave the mother and her litter undisturbed for at least 5 days before and after birth.

The spines of a newborn hedgehog are under the skin, and start to emerge within 24 hours. Eyes usually open in 13-17 days, and teeth erupt at 7-9 weeks. Weaning generally takes place at 4-6 weeks of age.