Guinea Pig


*Other names:* Cavy.

**Physical Description:** The guinea pig is a domesticated form of the South American cavy. Their name derives in part from the fact that when excited they often squeal like a pig. After years of breeding, the tame guinea pig we know today was developed. Breeds of guinea pigs may be black, white, yellow, brown, red, or a combination of these colors (calico). The coat of a guinea pig usually consists of coarse large guard hairs surrounded by undercoat of fine hair. Their wild ancestors are thought to have had short brown hair, which likely camouflaged them from predators. The hair may be short (English) or long (Peruvian), straight or curly, or it may grow in rosettes (Abyssinian). Twenty different *phenotypes* exist for hair color and 13 different phenotypes exist for coat texture and length. Guinea pigs are recognizable by their small, compact, cylindrically shaped bodies. They have small petal-shaped ears that are laterally positioned at the apex of the head. Their eyes are laterally positioned mid-way down the snout, between the ears and nose. They have small triangular-shaped mouths, which contain 20 teeth. Like many other rodents, guinea pigs have continuously growing teeth, and tooth length is maintained by grinding them together during feeding. Guinea pigs have 4 toes on the forefoot and 3 on the hind foot. Their tail is involuted (decreased in size and functionality) and their neck is not noticeable. Can weigh 11 oz.–3 lbs. (male guinea pigs are usually larger than females); most guinea pigs are about 8-10” long.

**Diet in the Wild:** Grasses, herbs and other plants.

**Diet at the Zoo:** Timothy hay, guinea pig chow, orange, kale.

**Habitat & Range:** Wild cavies live in rocky areas, grasslands, open woodlands, swamps, and dry plains from Peru to North Argentina of South America. Their domestic descendents, guinea pigs, are kept as pets in many parts of the world but are not found in the wild.

**Life Span:** Up to 14 years in captivity, but have an average lifespan of 3-5 years. Reproductively active guinea pigs generally have shorter life spans of about 3.5 years.

**Perils in the wild:** Cats, coyotes, wolves, domestic dogs, snakes, ferrets, hawks, owls, and humans.

**Physical Adaptations:**
- Guinea pigs, as is true of all rodents, must gnaw a great deal in order to keep their front teeth short.
- Guinea pigs have a well developed sense of both smell and hearing.
- They see in partial color and can see above and behind themselves.
- Spend a majority of their time grooming, feeding, or investigating their environment.
- Guinea pigs communicate through a variety of noises, including chutts, squeaks, whines, whistles, purrs, and chirps. Chutts are used during predatory pursuit events, while whines have been observed immediately after pursuit events have ended. Squeals, squeaks, and tweets are used to communicate injury or danger; whistles and chirps are used during long distance communication and to indicate the presence of food. Lastly, purrs are thought to be indicative of contentment.
Guinea pigs have a good spatial memory and can remember learned pathways to food sources for many months.

Heart rate: 240-250 beats/minute; compared to an average human heart rate being 65-70.

Behavioral Adaptations:

- Diurnal domestically, thought to be crepuscular in the wild, Guinea pigs are active up to 20 hours per day and sleep only for short periods.
- These rodents are very vocal and social, preferring to live in groups of 5-10, containing one male and several females.
- Male guinea pigs establish social hierarchies in which a single alpha male dominates subordinate males. Males are known to be extremely aggressive when competing for territory or potential mates. As a result, males are often separated when females are present.
- Whilst they do not dig or make burrows themselves, they use natural shelters, dense vegetation or the burrows of other animals as refuges.
- Guinea pigs are generally nervous of new sights, sounds, and smells.
- Guinea pigs have two primary defense mechanisms, "the immobility response" and "the scatter response". When individual guinea pigs encounter a perceived threat, such as an unknown sound or movement, they remain motionless until the perceived threat has passed. This is known as "the immobility response". When a group of guinea pigs encounters a perceived threat, they often scatter in an attempt to confuse and disorient potential predators, which is known as the "the scatter response".
- Guinea pigs are cautious and approach novel objects or unfamiliar guinea pigs with a stretched posture, making contact with their whiskers only, allowing them to move away rapidly if required.
- Guinea pigs use urine and secretions from their scent glands to mark one another and to mark out their territories, which can cover 1500 square meters.
- They often "huddle" to form tight groups for warmth and possibly security.
- Studies show that guinea pigs prefer low population densities. During periods of large population growth, they often create subpopulations in order to decrease local densities.
- Guinea pigs perform a digestive process called caecotrophy (a type of coprophagy) to extract as many nutrients as possible from their food. Food is passed through the gut and special droppings (caecotrophs) are produced. Guinea pigs eat these caecotrophs, allowing the food to be re-ingested.

Reproduction and Development:

- Male guinea pigs reach sexual maturity at 56 to 70 days old and females reach sexual maturity at about 67 days. Female estrus occurs 3 to 4 times per year and lasts approximately 16 days. Mating and fertilization usually occur at night, within 20 hours of ovulation.
- The female produces a litter of 1-4 young after a gestation period of 60-70 days (a long gestation period for rodents). The look like miniature versions of their parents when they are born.
- The pups are born with their eyes open, teeth fully developed, and are fully furred; quite different from most rodents. They nurse for about three weeks; weaning occurs 14 to 21 days after birth.
- If necessary, they can survive without their mother after about five days.
- Females are called sows; males, boars; the young, pups.

Additional Information:

- The guinea pig has been associated so long with research that a human volunteer for an experiment is often called a “guinea pig.”

09/04/2012
They were first domesticated by the Incas who raised them for food. Explorers took these animals back to Europe.

The guinea pig still has many wild relatives in South America. All of them are members of the cavy family, of which there are about 15 species.

There are several variations of the origins of the guinea pig’s name. Europeans may have thought that the animals came from the West African coast of Guinea since they were imported from South America via the Guinea slave trade ships. Other sources believe that the name comes from the fact that these rodents resemble the young of the bush pig (Guinea hog, *Potamochoerus*). Guinea may be a corruption of Guiana, the South American region from which GPs were exported. Guinea may come from the archaic meaning of the word, which was “foreign.” Guinea pigs came from South America and the English may have dubbed them “foreign pigs” or guinea pigs. Another possibility is that a guinea pig was sold for one English “guinea” (a coin).

Globally, guinea pigs are sold as pets and in South America, as a food.

**Conservation Status:** Not evaluated, bred in captive populations.

**Conservation Efforts:** N/A

**Glossary:** List of definitions of the most important recurrent technical terms used in the text.

**Caecotrophy** – a kind of coprophagy, common in rabbits and certain mammals, of ingesting waste pellets (feces/excrement), for nutritional purposes.

**Caecotrophs** – soft droppings that are expelled and re-eaten.

**Coprophagy** – the ingestion of feces/excrement, regardless of purpose.

**Crepuscular** – active at dusk and dawn.

**Diurnal** – active during the day.

**Estrus** – the period of heat, or rut, especially of the female during ovulation of the eggs. Associated with maximum sexual receptivity.

**Phenotypes** – the visible or expressed character of an organism (eye color, fur length, etc.), controlled by the genotype, although not all genes in the genotype are expressed.

**Sources:**
- Cincinnati Zoo & Botanical Gardens
- [http://switchzoo.com/profiles/guineapig.htm](http://switchzoo.com/profiles/guineapig.htm)
- [http://www.bbc.co.uk/nature/animals/pets/guinea_pig.shtml](http://www.bbc.co.uk/nature/animals/pets/guinea_pig.shtml)
- [http://animaldiversity.ummz.umich.edu/accounts/Cavia_porcellus/](http://animaldiversity.ummz.umich.edu/accounts/Cavia_porcellus/)
- [http://netvet.wustl.edu/species/guinea/guinpig.txt](http://netvet.wustl.edu/species/guinea/guinpig.txt)