

## Care of Guinea Pigs

### Introduction

Guinea pig is the common name for a cavy. Cavy is short for the species name *Cavia Porcellus*. The guinea pig neither comes from Guinea, nor is it a pig. It is currently considered a part of the family, *Rodentia*, and comes from the high plains of South America. The most accepted explanation for its common name is that the animal grunts and squeals like a pig and was sold by British sailors in the 1600s for a guinea, an old English coin.

Guinea pigs make good pets for a variety of reasons. They are a low cost, and fairly low maintenance pet; they are extremely docile, rarely bite, and are very social. They enjoy human/guinea pig interactions, and often love to be petted. Guinea pigs have another advantage over most other popular small mammals; they are relatively large and slow, and therefore, are often easy to hold (and catch if loose from their cage). Although they are not as intelligent as rats, the guinea pig is trainable, and with the proper stimulation, is quite lively.

In the wild guinea pigs are “herd” animals. They gather together into groups for survival, and these herd instincts are part of the domesticated guinea pig’s life. Wild herds of guinea pigs maintain a strict dominance ranking; a single, dominant male serves as the head of a harem of females. This instinct to gather is part of what makes guinea pigs such a pleasant pet. Guinea pigs kept singly look to their owners for the stimulation and companionship that is provided by the herd. Therefore, it is important not to house your guinea pig away from the family, in a garage, or unused back room. Although too much stimulation can stress a guinea pig, they prefer to be somewhere they can interact with the family. If you are planning to buy two or more guinea pigs so that they might keep each other company, remember that two adult males will not tolerate each other’s company and housing them together can lead to fighting, resource hoarding and eventually death for the submissive, weaker guinea pig. Two females can be successfully housed together, and a male/female pairing is best. Remember, guinea pigs are quite precocious and can start breeding as young as 4-6 weeks of age, therefore, unless you want lots of guinea pigs, it is best to get either the male or female or both guinea pigs neutered if you are housing a male and a female together.

### Housing

You have three choices when choosing a home for your guinea pig: you can buy a commercially manufactured cage, have one custom built for your pet from a pet or feed-and-garden store, or you can build your own. No matter which route you take, however, it is best to follow these basic guidelines:

Each guinea pig should have a minimum of two square feet in its cage. This means if you have two guinea pigs, the cage should be a minimum of 4 square feet and so on. Most commercial cages are designed for a single guinea pig.

You should not house a guinea pig in a cage with a wire bottom. Guinea pigs can very easily catch their feet and legs in a mesh bottom and often lose toes and break legs. If

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you are contemplating a cage with a wire bottom because it is the size you need, you will need to make a solid flooring, either from plastic, metal, or treated wood.

Large glass aquariums DO NOT make good guinea pig habitats. They are difficult to clean, they allow very little air circulation (which means that ammonia levels build up rather quickly), and they retain heat, especially if they are sitting in the sun.

Guinea pigs do not always handle heights well, so if you decide on a cage with multiple levels, make sure that the levels are fairly close together, to prevent serious injuries from falls.

It should be noted that since guinea pigs come from the high plains areas of South America, they have a much better tolerance for cold than they do heat. Guinea Pigs prefer temperatures of around 65 –68 F, however, they do not do well with colder drafts. They are very susceptible to heat stroke at temperatures above 80 F, so try to place their cages away from heat vents and direct sunlight if possible.

### **Bedding**

After you have decided on a cage, you will need to line the bottom with bedding. Bedding in guinea pig cages serves three purposes: it is the litter box, it serves as a substrate in which the guinea pig may nest and burrow, and it provides a soft surface on which to walk. A quality bedding should fit into these important guidelines: it should not cause your guinea pig health problems, and it should have some odor control. Given below are some evaluations of commonly available beddings, this list is neither complete, nor definitive.

**Cedar shavings:** Cedar should be avoided at all costs. Studies have shown that cedar bedding can cause chronic upper respiratory problems and significant liver changes. Some animals can also be allergic to cedar and develop *severe* skin rashes and respiratory problems. The same aromatic oils that cover odors and make cedar attractive to small mammal owners are what cause the problems.

**Pine shavings:** Pine shavings are a less aromatic softwood that are often packaged as bedding for small mammals. Similar problems exist as to cedar. The oils that help cover the ammonia odors also can cause problems for the small mammals housed on it. Some people recommend the use of kiln-dried pine shavings as these have only minute amounts of oil, but be aware, your guinea pig has a better developed sense of smell than you do, and has to live in close contact with its bedding almost 24 hours a day. Even small amounts of aromatic oils can become irritating in those circumstances. Pine bedding is definitely better than cedar bedding, and kiln dried is better than regular, but it is probably best avoided if possible.

**Aspen shavings:** Aspen is a non-aromatic hardwood, and its shavings make a safe bedding. It does not have much odor control, therefore, strict cage cleaning must be practiced to maintain odor control. Strict sanitary practices are healthier for your guinea pig anyway.

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**Carefresh:** Carefresh is a popular alternative to wood shavings. It is made from wood pulp fibers that are too short to be made into paper. The fibers are processed into what looks like shredded egg cartons. Carefresh's greatest strength is odor control; its paper base inhibits ammonia formation.

**Crown Animal Bedding/Yesterday's News:** These are two paper-based beddings that are compressed pellets (Yesterday's News does offer two densities – hard and soft). These beddings offer excellent odor control, however, they can be a little rough as a sole bedding. Combined with a top-dressing of timothy hay, they can make a very nice bedding.

**Corncob:** Corncob beddings have several drawbacks. Corncob is not very digestible and can form impactions if eaten by the guinea pig, and corncob bedding is very prone to mold growth. Because of these two factors, we do not recommend corncob bedding for guinea pigs.

**Straw:** Straw is unsuitable because it does not absorb urine and the hard stalks can cause eye injuries.

**Timothy hay:** Timothy hay can make a good bedding for guinea pigs. In addition to being a natural food source, guinea pigs enjoy tunneling through it, making nests in it and just playing with it. Fresh timothy has a pleasant smell, and will absorb some urine. The drawbacks are that it does not control odors, and it will mold when wet. If used as a top-dressing over a more absorbent bedding, such as one of the paper-based beddings mentioned above, it can be changed every one to two days, while the paper-based bedding may last a week or more between changes. Fresh timothy hay bought direct, is the best. Pre-packaged timothy hay, found in the pet store, is often dried to prevent molding on the shelf. This makes it harder, and less suitable as bedding.

**Cat litter:** As a general rule cat litter is not a good choice, because of 1) its indigestibility, 2) the chemicals most cat litters contain to control odors, and 3) its general rough, stony quality. Clumping litter, when wet, can get caught in the coat of a guinea pig and become cement-like. Because guinea pigs are lower to the ground than cats, this is a common occurrence.

### **Cage Supplies**

In addition to the cage itself, you will need a water bottle, and a food dish. A water bottle is recommended over a dish. Water in a dish will quickly become soiled with urine and droppings, or simply be over-turned. The water bottle should mount outside the cage and the sipper tube should be made of stainless steel. Many guinea pigs will chew on the tube as they drink and quickly ruin plastic tubes. The food dish should be heavy, and ideally wider at the bottom than the top, to make it difficult to overturn. It is also a good idea to have a narrower opening so that the guinea pigs do not sit in their bowl while they eat and then foul the food. A

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hay rack is also a good addition, as it keeps some timothy off of the floor of the cage and provides a cleaner food source.

For terrain and variety, rocks, bricks, and tubes may be added to the cage. These not only provide surfaces that help wear down claws, but also hiding places and things to help alleviate boredom. Four inch diameter PVC tubing bought at a home building supply store can make great inexpensive guinea pig toy. Elbow and T-joints work especially well. The PVC plastic is hard, durable, and easy to clean. All toys should be checked routinely for signs of wear and tear.

## **Nutrition**

Guinea pigs are strict vegetarians. In the wild they feed on grasses, and seasonal wild fruits and vegetables. Domesticated guinea pigs need a similar diet. For optimum health, grass hay should be the mainstay of your guinea pig's diet. Timothy hay is the best hay to feed, although other grass hays are acceptable. The high fiber content of hay will help keep your guinea pig's digestive system normal, and provide an outlet for his/her chewing instinct. Fresh hay should be available to your guinea pig at all times. A word of caution, alfalfa hay is an "okay" hay to feed if grass hays are totally unavailable, however, it is not recommended for long-term usage. The main reason for this is that alfalfa hay is high in both protein and calcium. The high protein amounts can lead to obesity, and the high calcium amounts can contribute to urolith (bladder stones) formation in some guinea pigs. Most pet stores carry pre-packaged dried timothy hay or fresh grass hay may be available through a feed store in your area.

Guinea pig pellets are also an important part of your guinea pig's diet. Pellets provide a proper balance of vitamins, minerals and other nutrients. They are a readily available source of protein for your guinea pig. There are several reasons why pelleted diets alone are NOT an adequate guinea pig diet. Unlike many other mammals, guinea pigs are unable to manufacture or store Vitamin C, so they must obtain it from their diet on a daily basis. One drawback to pellets is that they tend to lose Vitamin C as they sit on the shelf, therefore it is important to buy pellets in small quantities and to be sure that the pellets are freshly milled. Older pellets DO NOT contain adequate amounts of Vitamin C to prevent illness, and there is some debate about whether the fresh pellets contain enough. Therefore, it is important to provide your guinea pig with vegetables and fruits containing high amounts of Vitamin C. Another problem with pellets is that they do not contain high enough levels of fiber to regulate guinea pig digestion. Small amounts, about 1-2 ounces per adult guinea pig, should be fed in addition to hay and raw vegetables and fruit.

Supplementing your guinea pig's diet with fresh vegetables and fruits will help prevent boredom, as well as make sure that your guinea pig's diet is optimum. Things to consider when feeding your guinea pig fresh foods are:

1. Be careful to introduce new foods slowly and in small amounts – too much of a new food could cause gastric upset and diarrhea.
2. Please consider the size of the animal – one grape might not seem like a large amount of fruit to you, but to a guinea pig, a grape is the size of a cantaloupe.

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3. Because a guinea eats such small quantities, the vegetables and fruits you feed it should all be high in Vitamin C, such as broccoli, dandelion greens, kiwis, mustard greens, parsley, apples, green bell peppers, kale, fresh tomatoes, etc.
4. Avoid feeding iceberg lettuce, shelled nuts or seeds, dairy products and candy to your guinea pig.

### **Water**

All guinea pigs need water to survive. If they are fed fresh fruits and vegetables, they will obtain a portion of their fluid needs through that, however, a fresh clean water source should always be available. As mentioned above, the water should preferably be provided to your guinea pig through a water bottle. The water in the bottle should be changed daily and the bottle should be thoroughly cleaned periodically. Many guinea pigs like to “play” with the sipper tubes and will either let out large amounts of water into the cage or accidentally force food debris into the water – causing the water to become contaminated with bacteria, so the bottle’s water level should be checked more than once a day.

Some people supplement their guinea pig’s Vitamin C by adding crushed Vitamin C to the water. If you decide to do this, please read the following:

1. Add the appropriate amount of supplement to the amount of water that the guinea pig will drink in day and then if this does not fill the bottle halfway (most water bottles work best at half full or more) you will have to prepare more water to fill the bottle.
2. Vitamin C breaks down in sunlight and water, therefore, we recommend that you cover the water bottle with foil, AND prepare the Vitamin C/Water mixture on a daily basis.
3. The chlorine in tap water can actually inactivate ascorbic acid. Use bottled water or water that has been standing for at least 24 hours.

### **Health Issues**

Usually the first signs of illness in your guinea pig are lack of appetite and lethargy. Guinea pigs are herbivorous animals. It is normal for herbivorous animals to eat small amounts of food constantly. Therefore, if your guinea pig stops eating, you should be concerned.

Heat stroke: Guinea pigs do not tolerate heat well. They overheat rapidly and can die within minutes. Signs of heat stroke include listlessness, raising their heads, and shallow rapid breathing. It is very important to treat the guinea pig immediately by wrapping the guinea pig in a towel soaked in cool water, or spraying cool water on it. Cool pedalyte offered orally can also help.

Respiratory Infections: Guinea pigs are very susceptible to upper respiratory infections. Symptoms include nasal discharge, sneezing, and difficulty breathing. Upper

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respiratory infections can quickly lead to pneumonia in a guinea pig and guinea pigs with these signs should be seen by a veterinarian. One of the causes of pneumonia in guinea pigs is a bacteria called bordetella. This bacteria can be carried by rabbits and dogs. Never house Guinea pigs and rabbits in the same hutch, and limit dog/guinea pig interactions.

**Diarrhea:** There are many causes for diarrhea. It can be caused by overfeeding greens, bacterial infection, and other reasons. If the diarrhea is profuse and watery, your guinea pig should see a veterinarian immediately. If the diarrhea is semi-formed, and in normal amounts, try withholding greens (just feed lots of hay) and increasing fluid intake. Pedialyte may help in this situation also. Certain antibiotics can cause a life-threatening diarrhea, so never try to treat a guinea pig on your own.

**Bacterial/Fungal infections:** Due to their close proximity to the ground, guinea pigs wounds can easily become infected. If a wound is fresh, clean it carefully with hydrogen peroxide, and then maintain the cleanliness with a 1:10 dilution of Nolvasan solution or betadine solution.

**Broken Tooth/Teeth:** Sometimes guinea pigs can break their front teeth (incisors) either chewing or from a fall. If this happens, usually the tooth will grow back in about 2-3 weeks. Be advised that a close watch should be kept on the matching upper or lower incisor as these teeth grow continuously and without the matching tooth, the incisor can overgrow and cause trauma. If this is happening, your guinea pig should see a veterinarian about a tooth trim. While the tooth is broken, your guinea pig may have trouble grasping his/her food. Watch your guinea pig eat carefully, if it is having trouble grasping food, try chopping his/her vegetables and hay into smaller pieces as well as grinding his/her pelleted diet. It is very important that your guinea pig continue to eat, both for nutritional reasons and to keep his/her molars (back teeth) in good condition.

**Malocclusion:** This is a condition where your guinea pigs teeth do not meet properly and therefore do not wear properly. Since guinea pig teeth grow continuously, they need to wear against each other to maintain their proper structure. If they do not fit properly, either because of an hereditary/congenital misalignment, or due to tooth root abscesses, or broken teeth, they can become uneven, grow points, or grow at an angle. The teeth most commonly affected are the cheek teeth (molars), which can grow inwards and entrap the tongue, or grow spurs on the outer edges which can cause sores in the cheeks. If this happens, the teeth need to be filed by a veterinarian. If the front teeth (incisors) are affected, it is frequently an inheritable trait and these guinea pigs should not be bred.

**Impacted Molars:** Guinea Pigs teeth grow continuously throughout their lifetime. Sometimes, for reason veterinarians do not yet understand, the teeth will stop growing and the roots will grow instead. As the roots grow into the bone a painful inflammation of the bone occurs which will often cause the Guinea Pig to stop eating. At this time there is no cure for this disease, although medications can decrease the Guinea Pig's

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pain and inflammation. If your Guinea Pig stops eating, or slobbers continuously, it should see a veterinarian immediately.

**Dystocias (difficulty giving birth):** If a female guinea pig is bred for the first time after she is greater than 8 months of age, her pubic symphysis will have ossified and she will be unable to give birth without a C-section. Sows (female guinea pigs) bred before 8 months of age do not have this problem, but can have other problems giving birth. If your sow's labor seems protracted or she has active contractions for ½ hour without producing a piglet, please take your sow to a veterinarian as soon as possible. Dystocias can be life threatening to the sow as well as the piglets!

Many health issues can be avoided by careful observation and good husbandry practices. When in doubt about your guinea pigs health, please call your veterinarian.

## **Reproduction**

Most people who buy guinea pigs for pets aren't buying them to breed guinea pigs, but, unfortunately, sometimes the pet stores unknowingly sell pregnant females. This information is for those owners who have mistakenly adopted a pregnant sow (female guinea pig). Average length of gestation (pregnancy) in a guinea pig is 63-68 days. This is the longest gestation period of any animal in the rodent family! This is because the babies are born fully furred, with their eyes open and their teeth erupted. Baby guinea pigs will begin to eat their mom's food within a few hours of birth. The babies can be weaned from their mom at approximately three weeks of age. Even though they are so precocious at birth, they do still get vital nutrients nursing from the mother in those first few weeks. It is important to separate the sexes at weaning because female guinea pigs can be bred as early as 5-6 weeks and male guinea pigs can breed females when they are as young as 8 weeks. Average litter sizes in guinea pigs tend to be 2-3, but they can have as few as 1 and as many as 6 piglets at a time. If you are interested in breeding guinea pigs, you should research the subject more thoroughly than is covered in this handout.

## **Human Health Issues**

With the exception of certain fungal and bacterial diseases, there is little disease that a guinea pig can pass onto its human caretaker. It is important to note, however, that many people find guinea pig dander severely allergenic and have reactions ranging from a stuffy nose to hives to even anaphylactic shock. Therefore, any person considering a guinea pig as a pet should spend some time around guinea pigs before adopting them.

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