



Rabbits

Written by Dr. Scott Medlin

Rabbits are affectionate and curious little animals that many people mistakenly believe are going to be just like keeping a pet cat or dog. While they are cute and fuzzy like cats and dogs, and have similar lifespans (8-12 years), the environment they need to thrive can be quite different in several very important ways.

Background: Rabbits are all members of an Order known as Lagomorpha, and are all within the Family of Leporidae. After that, the rabbit group starts diverging into several different genuses. This is important to know because it means that your cute, cuddly little house rabbit did not descend from the wild rabbits we see outside. They are, in fact, distant cousins. The “wild” rabbits that we commonly see are members of the *Sylvilagus* genus which is populated by cottontail rabbits. This genus of rabbits populates North, South, and Central Americas.

House rabbits, on the other hand, are descended from a European species of rabbit. Specifically, they are thought to be descended from the genus *Oryctolagus cuniculus*, and have been kept (domesticated) by mankind for thousands of years at least. We know that the Romans kept them commonly. However, it wasn't until the middle-ages that selective breeding began, and true domestication was initiated in earnest. By the 1600's there were several breeds that had been developed. There are now at least 48 breeds of rabbits. Sources sometimes conflict with one another when investigating exactly which of those breeds are the oldest, but some of the breeds that commonly make the list of “oldest breeds” are: the Dutch, the Angora, the Champagne d'Argent, the Britannia Petite, the Flemish Giant, and the English Lop.

Enclosure: The best rabbit cages will have solid plastic bottoms that are easy to clean. Many of the common brands of rabbit cages that have solid plastic bottoms will come with wire tops that snap onto the solid plastic bottom portion.

Cages with wire mesh floors are not recommended because they are more likely to cause pododermatitis (aka bumblefoot). Bumblefoot is a persistent, costly, and frustrating disease to treat, which is why we feel that it is better to take steps to avoid it rather than repairing the damage once it shows up. If you absolutely cannot avoid having a wire mesh floor, try to cover a large portion of the mesh with a solid sheet of smooth plastic. Plastic is easy to clean and harbors fewer contaminants than wood. Of course, this plastic sheet will still need to be cleaned frequently if the rabbit is not litter trained. Another good option would be to use several of the timothy hay mats sold specifically for rabbits. This will double as a chew toy for your rabbit. Sheets of wood are used commonly by some, but are not recommended because they are difficult to clean and they harbor large amounts of bacteria and waste material even after cleaning.

Rabbits should be kept in a 2' x 4' cage at a minimum (8 sq ft). If you have done your homework, you will probably realize that many of the cages sold at pet stores as rabbit cages are much smaller than this.



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If you plan to purchase your cage from a store, focus on the large or the extra-large sized cages. For the adults of one of the larger breeds of rabbits, even the extra-large cages will not be sufficient. They will require a large playpen or similar type of enclosure. If you do opt for the smallest possible cage for your rabbit's size, you should then compensate for this by significantly increasing the amount of time that your rabbit is allowed out of their cage to play in the house/room.

It is not recommended to leave your rabbit in a cage or hutch outside. Rabbits prefer cooler temperatures, and the Florida heat is not ideal for them. Even in the shade, the summer temperatures can be too much for some rabbits. There is also a long list of diseases that occur much more commonly in rabbits who live in an outdoor enclosure including: cuterebra infestation (aka warbles or bots), maggot infestation, external parasites (primarily mites and fleas), internal parasites, attacks from wild animals, and heat exhaustion or stroke. Additionally, because they are not being handled and observed as carefully as an indoor pet, it is much more common for diseases that are potentially treatable when caught early to progress to advanced stages where treatment is no longer an option. Again, it is far better for the rabbit and the owner (and for the pocketbook) to avoid these problems from the start rather than repairing them once the damage is done. Keep your rabbits indoors!

Substrate: Cedar and pine beddings can potentially cause irritation and inflammation of the respiratory tract, which can lead to respiratory infections. They are best avoided. Instead, try using a paper-based substrate like Carefresh or even Yesterday's News brand litters. Aspen wood shavings do not contain the phenols found in pine and cedar, so even though it is a wood shaving it is generally tolerated well by rabbits.

Towels and fleece are both good choices to help protect the rabbit's feet (if kept clean) but can be problematic if the rabbit is chewing or eating them and should be used with caution.

Litterbox: Rabbits can be easily litter trained. Since this learned behavior can lead to more freedom inside the home, it is recommended that you teach your rabbit to use the litter box early on. The first step in litter training is to watch your rabbit's normal behavior. Rabbits will normally have a corner of their cage that they will designate as the latrine. Adding a litter box to in this same corner will improve the likelihood of the rabbit accepting and using it.

The next step will be to provide an appropriate sized box. Do not use a triangular litter pan designed to fit in the corner. Rabbits will often reject these. Instead, choose a litterbox that is large enough for your bunny to comfortably relax in. For dwarf rabbits, this can be a kitten-sized litter box. For Flemish giants, you will need a full-sized or larger litter box.

The next step is to provide a clean and hygienic space where your rabbit will want to spend time. A three-layered design is often the best design because it allows the urine to be wicked to the bottom, leaving the upper layer (and your rabbit) clean and dry. To make this three-layered litter box the



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bottom layer should be newspaper. Using an entire section of the newspaper (business, classifieds, etc) is recommended. Place a high-quality, non-toxic litter over top of the newspaper as the second layer. Carefresh is ideal, but you could also use shredded newspaper, or any of the paper-based litters. (Avoid clay litters as they are easily ingested and can lead to GI complications when used over long periods of time.) The third layer should be a high-quality Timothy Hay or Orchard Grass. This layer attracts your rabbit and encourages him/her to spend a little extra time hanging out in the litter box.

The final step is to add a few of the fecal pellets that your rabbit has already left around the cage into the litter box. Hopefully this will help your rabbit to get the hint! Even after a rabbit learns to use the litterbox, you should be aware that they will not use the litterbox 100% of the time. Small numbers of fecal pellets may still be found scattered around their environment. Rabbits are not cats. On a positive note, rabbit fecal pellets are not anywhere near as offensive as cat fecal waste, so it is generally not a hassle to pick up those few mis-deposited pellets.

Diet: An improper diet is, by far, the leading cause of bunny vet visits. The most important point that should be taken from this entire husbandry sheet is that your rabbit needs large amounts of hay to stay healthy. You could feed nothing except hay, and your rabbit would be a happy, healthy bunny. Everything that you feed that is not hay is a treat, and should be fed in portion sizes accordingly. Do not make the mistake of thinking that pellets = rabbit food. In fact, pellets = treat.

Hay: Feed your rabbit a high quality timothy hay or orchard grass. Offer a large handful twice daily (large breeds may need more). There are many good brands out there, but I find that the Oxbow brand seems to consistently produce a high quality product.

Pellets: Only after you have your bunny on high quality hay should you consider offering additional "fun" foods. The amount of pellets given should correspond to the size of your bunny. Dwarf breeds should be getting 1/8 cup per day, whereas a Flemish Giant or French Lop may need as much as 3/4 cup per day. As a general rule of thumb, you can give approximately 1/8 cup of pellets per kilogram (1kg = 2.2 lbs) per day. Avoid pellets with alfalfa as one of the main ingredients.

Fresh foods: Fresh foods are encouraged! They make a great treat for your bunny! Our personal experience has been that most rabbits are equally excited about a leaf of romaine lettuce as they are about carrots, BUT carrots carry a lot more calories in them. Carrots are not an inherently bad treat for rabbits, but they do contain a lot more sugars and calories than lettuces. The best fresh foods to offer are the soft lettuces, such as romaine, green leaf, red leaf, Swiss chard, and Boston leaf lettuces. Avoid dark, fiber-rich greens such as kale, collard greens, mustard greens, and turnip greens because they have high levels of calcium which may lead to urinary issues for bunnies. Fruits and vegetables have a lot more starches in them than the greens, and are not ideal for rabbit



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digestive tracts and so should be fed more sparingly. If you must feed carrots, limit it to one or two baby carrots per day.

Water: Water can be offered in a sipper bottle or in a bowl. Rabbits can do well with either. Offer fresh water daily, and if using a sipper bottle be sure to test them daily to ensure they are working properly.

Spaying: It is extremely important to note that female rabbits have an exceptionally high rate of uterine cancer compared to most other species (up to 80%), and spaying at a young age is highly recommended. If you adopt or purchase a female rabbit, you should be consider the cost of spaying a rabbit and make appropriate plans to do so before acquiring your new bunny.