



Ness Exotic Wellness Center
Dr. Robert Ness, DVM
1007 Maple Ave
Lisle, IL 60532
630-737-1281



CARE OF RABBITS

Our pet rabbits are direct descendants of the wild European rabbits. The scientific name *Oryctolagus cuniculus* means “hare-like digger”. The average life span for a rabbit is 7 – 10 years. Rabbits are intelligent, friendly, and quiet house pets.

Rabbit Behavior

Rabbits are herbivorous prey species and part of the rabbit’s anatomical design is geared towards detecting and escaping predators. For example:

Large Protruding Eyes – The position and size of the eyes allow the animal to see almost 360° around their body, although rabbits cannot see well directly in front of themselves. Rabbits tend to be able to see better things in the far off distance than close by. Rabbits also see things with out as fine detail as we see things. They see you as a “grainy” form and by using their other senses this is how they recognize you. But if you are carrying a box this alters your shape, they will no longer recognize you and it will frighten your little bunny friend.

Large Moveable Ears – Rabbits ears allow more sound waves to be collected based on their size to help detect potential danger. They can also move their ears independently of each other to further maximize their hearing ability. Only lop-eared rabbits cannot use its ears in this manner and that is because of their genetic altering by man. Their ears are also used to cool the rabbit off in warmer climates.

Twitching Nose – Rabbits wiggle their nose constantly, even when sleeping, to monitor their environment for potential danger.

Digging – Rabbits live in burrows so they are instinctually going to dig whether it is in dirt or your carpet.

Vocalization – Rabbits do not make much noise since they are prey species they do not want to draw attention to themselves. Bunnies do make low purring sounds, clicking or quiet grinding when content. When a rabbit is aggressive they will make grunts, growls and loud teeth grinding. When a bunny is in pain or afraid they will make a loud grinding noise. When a bunny is in extreme fear or pain they will let out a piercing scream.

Urination & Scent Marking – Un-neutered males will spray to mark their territory, as well as, use feces and chin items. Chinning is when your bunny is scent marking by using a scent gland that they (male and female) have under their chin.

DIET

The most important things in your bunnies diet is Water, Grass Hays, Dark Leafy Greens and Cecotropes (soft fecal pellets, that are ingested by your bunny to help aid in fermentation and provides nutrients)!

A basic healthy diet for a domestic rabbit should include the following:

1. Unlimited grass hay
2. Minimum of 1 cup of fresh dark leafy greens for every 2 pounds of body weight daily. Use three or more varieties of greens daily.
3. Fresh water daily
4. Other vegetables and fruits in *limited* amounts
5. Pellets are NOT needed in the house rabbit diet. However, if they are used they should be used in a restricted amount. NEVER use pellets as the total diet for a house rabbit!

Grass Hays

Grass hay is one the most important parts of your rabbits diet. By providing grass hay in the diet you are helping to promote a healthy rabbit and fighting off many diseases. Hay should be provided for your rabbit at all times and at any age. Hay provides many things for your rabbit:

- ✓ Nutrients – vitamins, minerals, and proteins.
- ✓ Provides “food” for the micro-organisms in the cecum (fermentation chamber) that make up the cecotropes
- ✓ Provides indigestible fiber that promotes healthy motility of the intestinal tract
- ✓ Promotes healthy chewing activity and proper wear of the teeth. This is important due to the fact that rabbit’s teeth grow through out their life time.
- ✓ Healthy mental activity by chewing the hay
- ✓ Gives the rabbit a full feeling in the stomach

There are two basic types of hay available: grass and legume.

Grass hays are made from timothy, meadow, oat, rye, barley or Bermuda grasses. Grass hays are rich in nutrients but provide the lower energy diet appropriate for a house rabbit. These are the healthiest hays to feed to your rabbit. If you have a choice when purchasing your hay, choose *sun-dried* hay which retains more of its nutrients than commercially dried hay. **DO NOT FEED STRAW!** Straw is totally devoid of most nutrients and is only useful as bedding.

Legume hays are made from alfalfa, clover, peas, beans or peanuts. These hays are loaded with nutrients but have more calories, calcium and protein than a house rabbit needs. Feeding only legume hays may lead to GI disorders and obesity and for this reason we do not recommend feeding these hays.

When purchasing your hay you need to consider the following:

- Buy hay that smells fresh, never buy damp or old hay
- Buy from a reputable source that replenishes the hay frequently
- If you buy from a feed store or horse barn, buy hay that has not been on the top of the pile to prevent contamination with animal or bird droppings.

Hay can be stored at home in a dry place that has good air circulation. Do not close the bag of hay leave it open to breath.

Dark Green Foods

Dark green foods are equally as important as hay in your rabbit's diet. Green foods provide all the same benefits as hay. They also contain a wider variety of micronutrients and importantly provide water in the diet. Feeding green foods forces the rabbit to take in liquid and thus helps promote healthy gastrointestinal (GI) function. Greens are appropriate for any age rabbit! If your rabbit has never eaten greens before, we recommend starting him/her on hay first. This will help to make the appropriate changes in the GI tract.

There are a *huge* variety of green foods that you can offer your rabbit. The darker green food is higher in nutritional values. You might even consider growing a patch of grass and dandelions in your yard just for your rabbit. But this grass **must be free of chemicals and pesticides!**

Here is a list of some recommended dark green foods:

Broccoli (leaves and tops)	Brussel sprouts	Bok Choy
Cabbage (Red, Green, Chinese)	Celery (Leaves are good)	Chicory
Collard Greens	Dock	Basil
Dandelion Greens & Flower	Borage	Endive
Swiss chard (any color)	Escarole	Kale
Parsley (Italian or Flat leaf)	Mustard Greens	Romaine Lettuce
Leaf Lettuce	Baby Greens	Spinach
Cilantro	Water Cress	Radicchio
Carrot Tops	Beet Tops	

Water

Water should be always be available and changed daily. Use either a water bottle or a heavy bowl for your rabbit. Also remember that your rabbit may not be drinking a large quantity of water if they are eating a large amount of greens!

Cecotropes

Rabbits are very successful at making the most out of the food they eat, food that other animals could not even digest. The key to their success is the production of cecotropes, which are a special type of dropping that, is eaten by the rabbit directly from the anus and then digested. These droppings are not made up of waste material but are rich in organisms that have come from the area of the intestinal tract called the *cecum*. These organisms are packed with nutrients such as amino acids (the building blocks of proteins), fatty acids and a variety of vitamins. In order for the rabbit to get these nutrients, the cecotropes, these organisms must be eaten and digested thereby extracting the nutrients. In this way, rabbits can extract the maximum nutrients from low energy food materials. Cecotropes are elongated, greenish in color, coated in mucous and have a strong odor. If a rabbit has a medical problem that prevents them from reaching the anus, then you may see cecotropes on the cage floor. Cecotropes are a vital part of your rabbit's diet!

Fruits & Other Vegetables – Treat Foods

Depending on the time of the year, rabbits in the wild would have access to additional foods such as fruits, vegetables and flowers. Since these items do not make up the majority of the diet, we recommend feeding these special items in limited quantities. *Commercial treats should be totally avoided because they are loaded with starch and fat and if fed in quantity can cause serious health problems.*

Follow the same guidelines as listed for selecting and using green foods with the exception of the amount. You can feed your pet *a total of 1 heaping tablespoon per 2 pounds of body weight per day* of any combination of the foods below:

Kiwi Fruit	Strawberries	Blueberries	Raspberries
Blackberries	Apple	Pear	Peach
Papaya	Pineapple	Cactus Fruit	Melons
Bean or alfalfa sprouts	Green/Red Bell Peppers	Mango	Cherries
Pea Pods (flat, no peas)	Cranberries		

Edible flowers from the garden (organically grown and NOT from a florist) such as roses, nasturtiums, day lilies, pansies and snap dragons.

Dried fruit can be used as well, but since it is so concentrated, use only half the amount as fresh.

Forbidden Foods

Avoid high starch and/or fat foods for your rabbit. Examples of high fat and/or starch foods to AVOID include: any kinds of Beans, Breads, Seeds, Chocolate, Peas, Cereals, Oats, Refined Sugar, Corn, Nuts, Wheat, and any other grains.

Commercial Rabbit Pellets

We do not recommend that you feed your rabbit commercial pellet diet. As mentioned before rabbits gain all the nutrition they need from grass hay, dark green foods and their cecotropes. In addition, these foods promote a healthy GI tract in your house rabbit and proper wear for their teeth.

Pellets were originally developed for rabbits in the meat, fur and laboratory animal industry to provide a uniform and highly concentrated food that could be easily fed to a large number of animals. The problems that a diet comprised primarily of commercial pellets can create in the pet rabbit can include; obesity, eating less cecotropes (decreases the natural flora in the rabbit preventing proper digestion) abnormal tooth growth, and decreased water intake causing urinary problems.

ENVIRONMENT

Cage

House rabbits should NEVER be kept completely confined to a cage. Exercise is vital for the health and well being of the rabbit. Rabbits are designed to run and jump and move over large areas. By placing a rabbit in a cage for most of their life leads to the possibilities of physical and/or behavioral disorders.

To limit a rabbit to a cage exclusively can lead to obesity, pododermatitis (inflammation of the feet), poor bone density, poor muscle tone, gastrointestinal and urinary dysfunction, and behavioral problems.

A house rabbit's cage should be high enough so that the rabbit can stand on their hind legs without hitting their head on the top of the cage, plus provide a resting area and space for a litter box. The cage should be easy to clean, indestructible, well-ventilated, and kept in a cool area. The cage floor can be either solid, wire, or grated. The optimum temperature for a house rabbit is between 60 - 70°F. If the temperature is in the upper 70's your rabbit may start drooling and have a clear nasal discharge. If the temperature reaches the upper 80's plus high humidity this could cause heat stroke and fatality. Always try to remember is you are hot in short pants and a short sleeved shirt imagine how hot your rabbit is in a fur coat!

Rabbits can be caged outdoors if they are provided a hutch that protects them from the rain, heat, and cold. Plus the cage has to be strong enough to protect your rabbit from hungry predators such as coyotes, dogs, cats, hawks, and raccoons. The cage also must be kept very clean to prevent from attracting parasitic insects.

Exercise

Your rabbit needs to be let out of his cage for exercise at *least* a few hours a day (2 -3 hours). There are a few ways to achieve a safe play/exercise area for your rabbit. First you can use small animal play pens or fencing panels. Most pet stores carry these now for rabbits. They are linkable metal fence that is 3 feet high and the wire is close together so that the rabbit can't get his feet stuck in between the wires. The pen keeps your bunny away from furniture, electrical cords, and toxic materials that can be found through out the home. The pen can also be used outside so that your bunny can graze on your pesticide-free lawn. Make sure to NEVER leave your rabbit unattended in the outside pen, because it takes only a minute for a dog, cat, raccoon or hawk to do harm to your rabbit. If you need to protect the floor under the pen you can use a sheet of no-wax flooring which can be found at most hardware stores.

If you are going to allow your rabbit free access to your house you need to "bunny-proof" the house. Block all escape routes, cover or block access to electrical cords/phone cords/computer cords, cover furniture to protect it from being chewed on or scratched by the rabbit's claws, and remove toxic plants, rodenticides, insecticides and other toxic materials/chemicals.

Litter Box

Rabbits can be trained to use a litter box. When you begin training your rabbit, confine your pet to a small area, either in their cage or a blocked off section of a room and place a litter box in the corner. When placing the litter box in the corner use the corner that your rabbit has all ready started using as a toilet area. Make sure the sides of the box are low enough so your pet can get in and out easily. Some people find it helpful to place some of the rabbit's droppings in the litter box to help them associate the box with elimination. Others have also found that hay in the litter box to help encourage defecation in the box, because rabbits will usually pass stool while eating. In the rabbits exercise area make sure to place extra litter boxes (one more than the number of rabbits) to help prevent accidents.

Pelleted litter makes the best substrate for your rabbit's litter box. Pelleted litters are non-toxic and digestible if eaten, draws moisture away from the surface keeping it drier, control odor well, and can

be composted. **Do not use clay or clumping kitty litter.** This type of litter can cause intestinal blockage in your rabbit.

Toys

Rabbits like to chew, so give them branches from untreated trees (dry the wood for at least a month to prevent any reactions to the sap), wooden chew toys for birds, or unfinished/unpainted wicker or straw baskets. They like things that make noise such as keys, hard plastic baby toys, jar lids, empty plastic bottles or metal cans that have **NO** sharp edges. They like things that both move and can be chewed such as toilet paper or paper towel rolls, empty small cardboard cartons and small piles of shredded paper.

Handling

The main thing to remember when holding/carrying your rabbit is to ALWAYS support the hindquarters to prevent serious spinal injuries. Rabbit backbones are fragile and can fracture if the hind legs are allowed to dangle and the animal then gives one strong kick. Unfortunately these injuries are usually permanent and frequently result in euthanasia of the pet, so the best policy is prevention. Never pick up a bunny by his/her sensitive ears because it is very painful and totally unnecessary! It is better to grasp the loose skin over the shoulders or scoop up under the chest and then place your other hand under the back legs to lift your bunny from the floor. When learning how to handle your rabbit and your rabbit's temperament keep them as close to the floor as possible so that if he/she jumps out of arms there isn't a chance for a fall. Ask your veterinarian or an experienced rabbit handler about other methods used to handle rabbits.

MEDICAL PROBLEMS

Loss of Appetite – Rabbits are eating machines and if you note that your pet has changed his/her eating habits, there is cause for concern. The most common reason a rabbit stops eating is in response to pain somewhere in the body. The rule of thumb regarding the seriousness of this is:

- ❖ **Loss of appetite but otherwise acting normal should be brought in for a veterinary exam within 48 hours.** Some rabbits may go through a slow down and then pick up again a day later. The key is that the rabbit is still active, alert, and is still producing stools.
- ❖ **Loss of appetite accompanied by obvious lethargy or depression should be considered an emergency and the rabbit should be brought in for a veterinary exam immediately.** This can be a sign of an intestinal obstruction or toxin ingestion. Another important sign is that NO stools are being produced.

Dental Disease – Dental disease can be the result of a variety of factors including trauma to the face, genetics (lop eared breeds have a tendency to have a malformed or too short jaw), nutritional disease, infectious disease and diet. Any of these conditions can cause a rabbit's teeth to be worn down improperly or causes misalignment can result in serious dental disease and death in the rabbit.

The best prevention for dental disease is a healthy diet of grass hay and dark green foods. But even with a good diet, there are still rabbits that develop dental disease due to other factors, particularly genetics. The treatment of dental disease is based on the cause of severity of illness. Your rabbit should have a dental examination performed by a veterinarian at least once a year. You should

NEVER attempt to trim a rabbit's overgrown teeth without consulting your veterinarian. An improperly performed tooth trim can lead to serious dental disease.

Neutering/Spaying – Uterine adenocarcinoma is a malignant cancer that can affect female rabbits over two years of age. The best prevention for this disease is to remove the reproductive organs (ovaries and uterus) in a surgical procedure commonly called a Spay. Male rabbits can develop testicular disease, but this is not very common. Neutering/Spaying can be performed on males/females between four to six months of age. There are other reasons for performing this procedure such as prevention of pregnancy, prevention of false pregnancies, prevention of mammary gland disease, prevention of aggressive behavior, and prevention of urine spraying.

Hairballs – Hairballs are often cited as a reason for rabbits to stop eating. The problem is not hair but abnormalities in the rabbit's gastrointestinal (GI) tract motility. A rabbit normally has hair in its GI tract due to grooming. A rabbit on a healthy diet of grass hay and dark green foods will not have a problem with this.

The only exception is that sometimes the long haired breeds such as Angora or Jersey Woolies can accumulate an abnormal amount of hair in their stomach even on a good diet. These breeds need to be brushed regularly to help prevent the ingestion of large amounts of their long hair.

Urinary Disease – The normal color of rabbit urine can range from yellow to dark orange-red. The color comes from the plant pigments in the food or from normal pigments produced in the wall of their bladder. The urine can be clear or cloudy with a white precipitate (white solid substances in urine). This white precipitate is excess calcium excreted through the urine. Rabbits can develop kidney or bladder disease and may exhibit signs such as blood in the urine, straining to urinate, inappropriate or frequent urination, or the total inability to urinate. If your rabbit is exhibiting any of these signs you should make an appointment to bring them in to see a veterinarian immediately.

ROUTINE VETERINARY CARE

Rabbits up to three years of age – Rabbits up to 3 years of age need annual physical examination.

Rabbits over three years of age – Rabbits over three years need to be seen for their annual physical examination and may also need blood work and radiographs to help the veterinarian better evaluate your pet's health.

Rabbits are wonderful pets but require some basic knowledge and understanding in regards to their actions and well being. They will bring you many moments of joy and happiness.

If you have any further questions in regards to your rabbit please contact our office at (630)737-1281 and we will be more than willing to help you in every way possible.