

BRAMBLEY HEDGE RABBIT RESCUE



Information Pack

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CARE OF RABBITS

Rabbits make intelligent, friendly and quiet house pets. The average life span for a bunny is 7 to 10 years with records of up to 15 years of age reported. The following information is designed to help you take the best care of your pet and enjoy a happy, healthy life with him or her.

DIET

Rabbit pellets: A good quality rabbit pellet may be offered daily but in limited quantities. The UNCONTROLLED feeding of a pelleted diet can lead to obesity, heart and liver disease, chronic diarrhea, and kidney disease which results from the high concentration of carbohydrates, low fiber and high calcium levels. Make sure that you buy pellets high in fiber (18%) or more and that you buy small quantities. Keep the pellets refrigerated or cool and dry to prevent spoilage. Old rancid pellets can cause a rabbit to stop eating.

Daily Amounts:

Rabbits up to 8 months		Free access to pellets due to rapid growth
8 months and up	2-4 lbs. body weight	1/8 cup daily
	5-7 lbs. body weight	1/4 cup daily
	8-10 lbs. body weight	1/2 cup daily
	11-15 lbs. body weight	3/4 cup daily

Do not refill the bowl even if all the pellets are eaten before the next day. Overfeeding of pellets is the number one cause of health problems that we see. Keep your rabbit healthy by not overdoing it.

TIMOTHY OR OTHER GRASS HAY SHOULD BE OFFERED DAILY IN UNLIMITED AMOUNTS. It is important that hay be available at all times for your pet. Rabbits tend to eat small amounts of food frequently throughout the day and withholding hay for long periods of time can lead to intestinal upsets. We prefer the loose long strands of hay as opposed to the pressed cubes or chopped hay. The fiber in the hay is extremely important in promoting digestion and for the prevention of hairballs. Hay also contains other nutrients essential to the good health of your pet. We no longer recommend the use of alfalfa hay, particularly if it is being used along with pellets, because it may provide too much calcium and carbohydrates which may lead to serious health problems and digestive upsets. Remember to ALWAYS HAVE HAY AVAILABLE TO YOUR PET.

Fresh foods: Fresh foods should be given daily. If your pet is not used to getting any fresh foods, then start out gradually with green leafy veggies and add a new food item from the list every 5-7 days. If the addition of any item leads to diarrhea or unformed stools in 24 to 48 hours, then remove it from the diet. Young bunnies should also be introduced to new foods gradually (and never before 4 months of age). The total amount of fresh food that can be given daily is about 1 heaping cup per 5 pounds of body weight.

The following are all foods that you can try on your pet: Carrot tops, beet tops. Dandelion greens and flowers (no pesticides please), kale, collard greens, escarole. romaine lettuce (don't give light colored leaf lettuce or iceberg lettuce or cabbage) , parsley, broccoli (including leaves) carrots, green peppers, pea pods, brussel sprouts, basil, peppermint leaves, raspberry leaves raddichio, bok choy and spinach.

Try to feed at least 3 different types of greens daily. Feeding just one type of green food only (especially broccoli, brussel sprouts and spinach may lead to nutrient imbalance).

Treat foods: In small amounts (about 1 level teaspoon per 5 lbs. of body weight). You can give one of these treat foods daily: Strawberries, papaya, pineapple, apple , pear, melon, raspberries, peach , banana, dried fruit, or whole grain bread.

WE DO NOT RECOMMEND GIVING ANY OF THE FOLLOWING FOODS BECAUSE OF THEIR POTENTIAL FOR CAUSING DIETARY UPSET AND OBESITY: Salty or sugary snacks, nuts, chocolate, breakfast cereals and other grains including oatmeal and corn.

Water: This should always be available and changed daily. A dirty water container can breed bacteria that can cause disease. Providing both a water bottle and heavy crock that cannot be tipped over is recommended. Do not use medications or vitamins in the water because your pet may not drink if the taste or color is altered.

Vitamins: These are not felt to be necessary if the rabbit is getting pellets, hay and fresh foods in the diet. In fact, the indiscriminate use of vitamins may lead to overdose and serious disease.

Night droppings: It may seem strange to list this as part of the diet, but these "special droppings" are an essential part of your pets nutrition. During certain times of the day usually in the evening, you may observe your pet licking the anal area and actually eating some of the dropping in the process. These cecal pellets are softer, greener and have a stronger odor than the normal, hard, dry, round waste droppings. Your pet knows when these dropping are being produced and will take care of eating them himself. These cecal pellets come from the cecum, which is part of the digestive system and they are rich in vitamins and nutrients. This habit may appear distasteful to us, but it is normal and important for your bunny.

ENVIRONMENT

Cage: A metal cage may be used with a wire flooring of 14 gauge wire. The size of the cage should be 36" x 36" high. A solid floor area is necessary to prevent sore hocks and to provide an area for resting. You can use a towel (unless you have a pet that likes to eat towels) or a piece of carpeting or wood for the solid area. We have found that the Synthetic fleece cloth that is sold in fabric stores works very nicely, as it is washable and if the pet chews on it there are no long strands of fabric that can get caught in the digestive tract. Newspaper can be used under the wire. Do not use aquariums or walled cages because the lack of sufficient air circulation has been directly correlated with an increase in respiratory disease.

When your bunny is roaming the house make sure his or her activity is supervised and make sure that you eliminate all areas that your pet can get wedged in or escape from. Also watch out for electrical cords, which they like to chew on, carpeting which they can dig up and chew and any toxic material such as rodent poisons that your pet could get into. Get on your hands and knees and bunny proof your home.

Litter box: Rabbits can be litter box trained relatively easily. Initially you need to keep your pet in a small area, either in a cage or a blocked off section of the room and place a litter box in the corner (try to pick the corner your pet has already used) Make sure the sides of the box are low enough so your pet can get in and Out easily. It is helpful to put some of the droppings in the box. You can reward your pet with one of the treat foods listed previously. Do not punish you pet while in the litter box. Do not worry if your pet sits for extended periods of time in the litter box. Sitting in the box can be allowed as long as he is not soiling himself. Pelleted paper or other organic products make the best bedding. These products are non-toxic and digestible if eaten, easier to clean up than shavings or clay litter, control odor better and are compostable. Some examples are Cellu-Dri and Yesterday's News (which are paper products) Mountain Cat Kitty Litter or Harvest Litter (pelleted wheat grass products) and Critter Litter (pelleted oat hulls. There are many more products on the market and we suggest consulting your pet store.

Temperature: Rabbits should be kept into the coolest and least humid area of the house. The optimum temperature range for a bunny is 60-70 degrees F. On very hot days, if air conditioning is not available it is helpful to leave a plastic milk jug filled with frozen water for a portable air conditioner.

Handling: There are a number of ways to pick up your pet depending on how calm he is and his size. The main thing to remember is to always support the hind quarters to prevent serious spinal injuries. Rabbits backbones are fragile and can easily snap when the hind legs are allowed to dangle and the animal gives a strong kick. Unfortunately these injuries are usually permanent and frequently result in the euthanasia of the pet, so the best policy is prevention. Never pick up a bunny by their sensitive ears, as it's very painful and totally unnecessary!!!. It is better to grasp the loose skin over the shoulders and then place your other hand under the back legs to lift your bunny from the floor. Work near the floor when first learning to handle your pet so that if they jump out of your arms they don't have far to go. It may also be useful to put your bunny on its back when trying to trim nails and examine the underside of your pet. Most rabbits will learn to relax in this position and can withstand quite a bit of handling. Work on the floor and put the rabbit on its back with its head just over the edge of your knees so that it hangs down a little. Restrain the body firmly between your thighs. Talk softly and stroke its chest and abdomen gently. It may be necessary to have a second person hold one set of legs when first learning to trim nails in this position. However many pets become so relaxed that one person can do all the grooming by themselves.

MEDICAL PROBLEMS

Females: The leading cause of death in the female rabbit is cancer of the uterus. This cancer is preventable by having your pet spayed between 6 months and 2 years of age.

Males: Some male bunnies may become extremely aggressive when they reach sexual maturity. There may be excessive biting and spraying of urine outside the regular litter box area. The urine may develop a strong and unpleasant odor due to the presence of male hormones and these little boys may not groom themselves well. Developing stained and messy tail areas. The best solution to these behavioral problems is to have your pet neutered by an experienced vet. This procedure can be done any time after 5 months of age.

Overgrown teeth: Overgrown incisors are usually caused by a congenital defect. Other causes can be injury or trauma to the teeth. Rabbits teeth grow constantly throughout their life. If the incisors or molars are not lined up properly they do not get worn down, which results in overgrowth. Overgrown teeth can cause mouth infections, ulceration of lips or tongue. And inability to pick up and eat food. The most common treatment for these overgrowths is to have the teeth cut periodically every 3-8 weeks. We do not recommend the use of nail trimmers for this procedure because it can easily result in the fracture of the incisor deep under the gum where there

is potential for infection. Your veterinarian will use a special instrument to trim the teeth safely. A permanent cure for overgrown incisors is the complete removal of the incisors under a general anesthetic. Rabbits are able to eat normally afterwards (with cut up veggies and leafy portions of hay) and teeth trimming will no longer be necessary.

Loss of Appetite: There are a variety of reasons why a bunny will lose his appetite. The most common reason in our experience is a diet low in fiber and high in calories. This combination can lead to obesity, fatty liver disease, sluggish movement of the intestinal tract, and accumulation of hair and food in the stomach. We consider hairballs to be a symptom of other problems (usually a poor diet) and not a primary disease in itself. Another common condition which can cause appetite loss is dental disease. Overgrown molars that have sharp edges or abscesses may cause pain when attempting to eat. Less common, but very serious conditions that can also lead to appetite loss include uterine infections, abscesses, respiratory infections, gastrointestinal infections, middle ear infections, bladder and kidney infections and ingesting toxic or indigestible materials. Loss of appetite is something that should be investigated by your veterinarian within 48 hours. Rabbits rapidly develop a deteriorating condition of the liver when they go without food. If the liver deteriorates excessively there may be no way to reverse the process. Early diagnosis and treatment is the best way to save your pets life.

Pasteurellosis: A large percentage of rabbits harbor a bacteria in their sinuses called *Pasteurella multocida*. This bacteria doesn't cause a problem in most bunnies with a healthy immune system. However, under certain conditions such as poor diet, high environmental temperatures, poor circulation, overcrowding, moving, etc., this bacteria can reproduce rapidly and cause potentially serious disease. This bacteria may cause infections of the upper respiratory tract, uterus, kidney, bladder, tear ducts, middle ear or lungs. Please have your rabbit examined if you observe discharges around the eyes, or anal area, or if there is a loss of appetite, depression, diarrhea, head tilt, loss of balance, or labored breathing, NEVER attempt to use antibiotics without veterinary supervision. Your rabbit's gastrointestinal tract is an extremely delicate organ, dependent on healthy bacteria to digest the food. If antibiotics are given indiscriminately, death may result because the antibiotic killed the normal bacteria which led to an overgrowth of deadly bacteria.

Diarrhea: True diarrhea is not common in the rabbit. This is a condition where all stool being passed is in a liquid form. This is a very serious condition and your veterinarian should be consulted immediately. What most people refer to as diarrhea is an intermittent passing of soft liquid or pudding like stools. There are a variety of reasons for this condition, but by far the most common reason is a lack of sufficient fiber in the diet and obesity. Eliminating the pellets from the diet and feeding good quality grass hay only for 1-3 months may clear up the problem. Consult your veterinarian if your pet has this condition before making changes in the diet.

HELPFUL LITERATURE

A good publication that is well written and of interest to the house rabbit owner is the House Rabbit Journal. Write to The House Rabbit Society, 1615 Encinal Ave. ,Alameda, CA 94501. The cost is \$12.00 for 12 issues. We also recommend the House Rabbit Handbook. Also contact your local Rabbit Rescue if you are interested in helping Out the organizations with foster care or general support.

Above all, enjoy your pet and give him or her your love and affection. Your bunny deserves it and he or she will repay you with years of enjoyment and the opportunity to see life at a slower, calmer "bunny pace."

RABBIT SUPPLY LIST

In the cage:

Roomy cage - with front door so bunny can enter/exit during “free” time; deep litter tray.

Secured bowls - for pellets, hay and water (or use a water bottle).

Litterbox and non-toxic litter - We recommend an organic litter such as CareFRESH litter, Cat Country, or Yesterday’s News. Provide a fresh clean litterbox daily, adding hay on top of the litter as an additional enticement to use the box. (Pine and cedar shavings in box or cage tray are suspected causes of liver damage and respiratory problems)

Newspaper - to line the tray in bottom of cage.

Artificial fur or lambswool squares - from fabric store to rest feet from wire cage floor.

Food/water - unlimited high-fiber hay (Timothy hay; orchard, meadow or Bermuda grasses). Very limited plain rabbit pellets. Fresh water. Fruit and vegetables in moderation (see our feeding guide).

Toys - plastic baby keys, empty toilet paper rolls, some hard plastic cat toys, metal canning jar rings. Some parrot toys that hang from top of cage. Out of cage you can provide boxes filled with hay, cat tunnels, large PVC tubes or round cement forms to run through!

Out of the cage:

Nail clippers - Trim nails about once a month using cat/dog clippers.

Brush - always brush loose hair from rabbit, especially during molt.

Flea powder - when you see a flea problem use 5% Sevin dust or kitten flea powders that do not contain pyrethrins.

White vinegar - reduces odor. Wipe down cage once a month or use to neutralize accidents. Also excellent to dissolve urine crystal build up and keep litter pan fresh.

Litterbox with organic litter - as needed, one or more litterboxes available out of cage.

Whisk broom and dust pan - to sweep up mistakes.

Bunny-proofing materials - clear plastic tubing from hardware stores. Split tubing and insert telephone cords, wires, etc. For aggressive chewers, try PVC tubing. Can use “flex -tube” from auto parts stores. Extra litterbox or cardboard box for digging. Fill with hay or litter. Carpet sample squares for problem digging areas. Large ceramic tiles to cover problem corners and give a cool surface to sit on.

Always supervise your rabbit outdoors - Use a playpen with floor or run wire below ground level so they cannot dig out. Watch for predators do not leave unattended.

Food & Diet

Additional information is available in the [alt.pets.rabbits](#) faq.

Fresh Vegetables

Contrary to popular opinion, expert rabbit veterinarians (and the House Rabbit Society) recommend that rabbits be feed plenty of fresh vegetables from the time that they start eating and throughout life. Introduce only one vegetable at a time, in small amounts. If your rabbit experiences diarrhea or any change in his droppings, discontinue that vegetable, wait a day and introduce another. Consistency is the key; feed vegetables daily.

You may choose from the following list (a minimum of 3 daily is ideal).

basil	
beet greens	
bok choy	
broccoli (including leaves)	
brussel sprouts	
carrot & carrot tops	
celery	
cilantro	
clover	
collard greens	
dandelion greens and flowers	
escarole	
green peppers	
kale	
mustard greens	
mint	
parsley	
pea pods	
peppermint leaves	
raddichio	
radish tops	
raspberry leaves	
red leaf and romaine lettuce	
spinach	
watercress	
	Fruits
	apple
	melon
	peach
	strawberries
	blueberries
	papaya
	pineapple
	raspberries

Pellets

Rabbits should be fed fresh, good quality pellets. If possible, purchase pellets from a feed store. If you switch from one brand of feed to another, do it gradually to avoid upsetting the rabbits digestive system. (Many pet supply stores keep food in their warehouses for many months prior to when it is placed on their shelves and often their food is already stale.) You should not purchase more than a 6 weeks supply of food at a time or it will become spoiled/rancid and can cause the rabbit to stop eating. Call around until you find a feed store that will sell small quantities like 5 or 10 pounds or share purchases with a friend who has a rabbit.

Pellets should be available 24 hours a day for rabbits under 6 months old. After 6 months of age pellets should be reduced to 1/8 cup per 5 pounds of body weight (but hay must be part of the diet, see below):

Hay

A constant supply of good quality hay must be available 24 hours a day. It has been documented that plenty of roughage, especially hay, will reduce problems with hair balls and other blockages, which can be deadly to rabbits. If you want your rabbit to live to his or her full life expectancy of

5 - 10 years (16 years maximum) you must provide hay. Alfalfa hay may be fed until the rabbit is 6 months old., after that age you should switch to a grass of timothy hay, or you may feed timothy hay under 6 months of age to avoid making that change.

Other good sources of roughage are apple tree twigs. Other fruit tree clippings may be offered, but they must be thoroughly dried (minimum of 30 days) before using, because they contain cyanide which dissipates during the drying process. Do not use if the tree has been, sprayed.

Water

Fresh water must be given daily. Always dump out water that is left in bottles or bowls and refill every day! Rabbits use more water from bowls than they do from a bottle because it is easier (and more natural) to drink. We recommend using a heavy ceramic dish that cannot easily be overturned as the primary source of water and perhaps a bottle as a backup in case the water is spilt.

Water containers should be thoroughly washed along with your dishes every day. If left unwashed you'll find scum building up in the container which is not healthy for your rabbit. If you wouldn't drink out of it neither should your rabbit! (Bottles & bowls can be soaked for 5 minutes in water and a small quantity of bleach to remove or to prevent "green" tinge.)

Misc.

Avoid sugar! Rabbits will overindulge & beg for it, but it increases the bad bacteria in their digestive system which can cause diarrhea or a loss of appetite among other problems.

Medical Information

RED URINE

Rabbits urine varies in color from clear to yellow to brown to bright red. This is usually not a cause for alarm UNLESS there are additional signs such as sitting & straining to urinate, loss of appetite or a temperature. When you see red urine don't panic, just keep your eyes open for other signs that might indicate a problem. The red color will usually be gone in a day or two, but can last for a much longer time. If you're in doubt, your vet can test to see whether or not there is blood in the urine.

AMOXICILLIN DANGER

Never let a vet give your rabbit amoxicillin. (It is an antibiotic and is recognizable as a pink liquid that smells like bubble *gum*. It is killing a very large percentage of the rabbits that receive it.) All drugs in the penicillin family are bad for your rabbit as they kill the "good" germs in the rabbits intestines and can cause other organs to malfunction. There are other very effective antibiotics that can be safely given to rabbits, such as Baytril. Occasionally a rabbit can't tolerate one antibiotic. For instance they may stop eating or experience diarrhea, and another antibiotic will have to be tried instead.

CEDAR SHAVINGS

These are very bad for your rabbit and other pets. "Aromatic hydrocarbons from cedar bedding materials can induce biosynthesis and hepatic microsomal enzymes" which are known to cause liver disease. (Quoted from the U.S. Department of Health and Human Services guide for the care of laboratory animals. Please pass the word to pet shops and others who carry this material for small animals. If they won't use it for lab animals we sure don't want it for our house rabbits. Use organic litter for the litter box and put newspaper in the tray if you have a cage for your rabbit.

SPAY/NEUTER

The House Rabbit Society has had over 850 (as of March 1991) rabbits spayed or neutered with one reported death from anesthesia. That's .1%, not 10% or 50% that some veterinarians quote as deaths due to anesthesia. To a knowledgeable vet a rabbit neuter (male) is relatively simple and quite safe. A rabbit spay (female) can be dangerous and life threatening if improper technique or general anesthesia is used. If the female is over 18 months old it is recommended that blood tests be done to assess liver and kidney function prior to general anesthesia.

Why Spay/Neuter?

80% of unsplayed females (some statistics quote as high as 95%) will get uterine or ovarian cancer between two and 5 years of age. Preventing cancer by spaying your rabbit will give her the potential to reach her possible life span of 8 10 years of age. Some rabbits that I'm aware of have lived to be 16 years old.

Upon reaching sexual maturity the male rabbit will often become a real nuisance. He will fight with other males. He will fall in love with your slippers (both off and on your feet) and will spray you, your slippers and other items that he wishes to make his very own. Neutering has completely stopped that behavior in all of the males that I've had altered, although it's probably not a guarantee.

AMPUTATIONS

Rabbits can live as amputees. You may have to help them off and on the couch, but if an accident or illness causes you to make a decision to amputate or to consider euthanasia, please also consider that they can get along just fine on (for instance) just 3 legs.

PARAPLEGIC RABBITS

It does not happen often, but it is not uncommon for a rabbit to break their back. Not everyone can put the time and energy into caring for a paraplegic rabbit, but be aware that it is possible for a paraplegic rabbit to live out its life with you. If it's an only rabbit, you might even consider getting it an older, quieter rabbit as a friend to help with the grooming. I can put you in touch with other people living with this type of friend.

TEETH

Rabbits teeth can be misaligned. This condition is known as a malocclusion, which means that their constantly growing teeth do not wear properly. If the misalignment is bad, the teeth will need to be clipped periodically so that the rabbit can eat. One of my rabbits teeth must be clipped weekly, but it is usually required only once every 2 to 4 weeks. Your veterinarian can do this for you or show you how to clip your rabbits teeth at home. The misalignment of the front teeth can be easily seen. The back teeth usually cannot be seen and the veterinarian may have to anesthetize the rabbit in order to check their molars. One indication that their back teeth may be a problem, is a wet chin that is caused by drooling.

HAIRBALLS

Rabbits shed their hair every 3 months. Every second shedding is light, followed three months later by a heavy shedding. This is the largest cause of problems and deaths in rabbits. You **MUST** brush & comb your rabbit to get the hair off of them when they start to shed. Rabbits groom themselves like cats and will ingest all of the loose hair on themselves and their rabbit companions.

They must have a handful of alfalfa or timothy **HAY** each and **EVERY DAY** (do not give the small compressed hay blocks as the fiber is too small and therefore not helpful) as well as plenty of exercise, in order to help the hair that they do ingest to pass through their systems. The hay will not eliminate the need for brushing. Rabbits that ingest carpeting and other material may also suffer from the same symptoms.

The first sign of hairballs (or rabbits having an unusual amount of foreign substance in their stomach): Droppings will get smaller and will often be strung together or will

have hairs or pieces of carpet fiber showing in the round droppings. As time goes on, the rabbits stomachs will get larger and appear to be quite fat, but when petting or rubbing it's back, you'll begin to feel the bones as it loses weight on it's way to starving to death.

Another idea is to give your rabbit Petromalt or Laxatone (2 brand names of a cat hairball remedy) once a week when not shedding and then daily or twice daily when they shed. Some rabbits like the taste and will lick it from the container. For other rabbits you can smear it on the top of their paw and they will (usually) lick it off. If this gives your rabbit diarrhea then don't give it to him.

Treating the first signs of hairballs is controversial, please call if you ever have a problem, but the first thing to do is to get them to eat as much roughage as they will. Hay, tree branches, blackberry vines (stickers and all), etc.

SURGERIES

Food and water should NOT be removed from a rabbit the evening before surgery! Ignore this direction if given by the front office staff and discuss this with your vet if the instructions come from him/her. Rabbits cannot throw up and possible vomiting is the reason that food is removed from cats & dogs. It is harmful to the rabbit and causes a longer recovery time if food is removed. The rabbit should also be tempted to eat as soon as they are awake to assist with the recovery process.

PARASITES

Rabbits can get the common dog or cat flea. Be very careful about the products you use to treat the home & yard, as well as the products you use on your rabbit. If the yard is treated do not allow your rabbit on it for at least a week and then water it thoroughly to wash off any residual chemicals. Use a spray or "bomb" that contains "pyrethrins" and "Precor" (methoprene). Flea powders labeled for use on kittens that contain pyrethrins can be used.

A mite that lives on the skin dander of rabbits will cause your rabbit to scratch and if left untreated will eventually develop thick crusts on their bodies. An injectable drug called ivermectin can be given twice, 2 weeks apart, to eliminate this problem. Rabbits can die if the ivermectin dosage is not correct, so for you home treatment people, please see your veterinarian for this one.

Earmites cause rabbits to shake their heads frequently and scratch at their ears. If left untreated a middle ear infection could develop which can cause a problem with their balance. Ivermectin is again the preferred treatment.

An internal parasite called coccidia can infect the small intestines. Symptoms can be loss of appetite to chronic diarrhea and occasionally death. A rabbit is considered to have diarrhea if the droppings are not firm and round. If the droppings are round but squish when you pick them up, your rabbit has diarrhea. The test for coccidia seems to be the one test that veterinarians routinely perform, but I have yet to have one test positive.

It's usually unnecessary, but might help your peace of mind to have your newly acquired rabbit tested for the above parasites. But once you have your rabbit, if you keep his home clean these shouldn't be a problem.

VETERINARY REFERRALS

Please contact a local HRS representative or call the HRS vet referral line at (510) 559-8367 if you'd like to find a veterinarian qualified to treat your rabbit. Also, check out our recommendations for good rabbit vets document.

We are finding many veterinarian that are treating rabbits who are not qualified to do so. If a veterinarian is not keeping upon the available literature he/she will not be aware of the latest antibiotics or the proper anesthesia to use, etc. We have one list of veterinarians that we recommend for spay/neuter surgeries and another list of veterinarians that are well schooled in all phases of rabbit medicine. Unfortunately this is not a very long list and it has taken us considerable time to locate qualified doctors. If we give you a doctor's name within a clinic, ask for that doctor when you make an appointment.

Last Modified: 5/22/96 *parsons@cambridge.apple.com*

Suggested Toys for Rabbits

*by Margo
DeMello*

Toys provide:

1. Mental stimulation. Without challenging activities to occupy your rabbit when you're not home, your rabbit, especially a solitary rabbit, will get bored. This could lead to depression and/or excessive destruction. The creative use of toys can extend your rabbit's life by keeping him interested in his surroundings, by giving him the freedom to interact with those surroundings, and by allowing him to constantly learn and grow.

2. Physical exercise. Your rabbit needs safe activities to keep her body in shape as well as her mind. She needs things to climb on, crawl under, hop on and around, dig into, and chew on. Without outlets for these physical needs, your rabbit may become fat or depressed, or may create jumping, chewing, or crawling diversions with your furniture.

3. Bunny proofing for your home. As is clear from the above descriptions, toys are not just for your rabbit, they also keep your house safe. By providing your rabbit with a selection of toys chosen to meet her age, sex, reproductive status and temperament, you have fulfilled most of the requirements of bunny proofing your home. Some good toys to start with:

- Paper Bags and Cardboard boxes for crawling inside, scratching, and chewing
- Cardboard concrete forms for burrowing
- Cardboard roll from paper towels or toilet paper
- Untreated wicker baskets or boxes full of shredded paper, junk mail, magazines, straw, or other organic materials for digging
- Yellow Pages for shredding
- Cat toys: Batta balls, and other cat toys that roll or can be tossed
- Parrot toys that can be tossed, or hung from the top of the cage and chewed or hit
- Baby toys: hard plastic (*not* teething) toys like rattles and keys, things that can be tossed
- Children's or birds' mobiles for hitting
- 'Lazy cat lodge' (cardboard box with ramps and windows) to climb in and chew on. Also, kitty condos, tubes, tunnels, and trees
- Nudge and roll toys like large rubber balls, empty Quaker Oat boxes and small tins
- "Busy Bunny" toys
- Rainbow slinkies
- Toys with ramps and lookouts for climbing and viewing the world
- Dried out pine cones
- Jungle gym type toys from Toys R Us
- A (straw) whisk broom
- A hand towel for bunching and scooting
- Untreated wood, twigs and logs that have been aged for at least 3 months (apple tree branches can be eaten fresh off the tree. Stay away from: cherry, peach, apricot, plum and redwood, which are all poisonous.
- Untreated sea grass or maize mats from Pier One or Cost Plus Imports

HOUSING

Cages in General

Rabbits were not designed to live on wire floors!

Being on wire floors will cause sores to develop on rabbits feet.

Cages were designed for the convenience of rabbit breeders with lots of rabbits who were looking for an easy way to care for many rabbits in the least amount of time.

A house rabbit does not need a wire floor.

All cages with wire floors must have a piece of plywood, Plexiglass or carpet square that the rabbit can sit and lay on. If you try carpet and the rabbit chews on it, immediately remove it and replace it with plywood. The thing to remember about cages is: the bigger the better! A rabbit confined to a cage for over 12 hours a day must have a cage at least 3' x 3. Better yet consider building a two story 'condo' for your bunny.

Rabbits Outside

It's a joy to watch rabbits when they play outside, but....

Do not let your rabbit onto grass that has been sprayed with pesticides or lawn fertilizers.

Always supervise your rabbit while she's outside. It takes just a few seconds for the neighbors' or your own dog to jump the fence and attack or frighten the rabbit (literally) to death.

Under no circumstances should the rabbit be left outside after dark, even in the middle of cities. Predators are possums, raccoons, coyotes, dogs and occasionally even a cat will attack a small rabbit. If you have an enclosure that you feel is very secure, a rabbit can still die of fright while a predator attempts unsuccessfully to break into the enclosure.

Caged Part of the Time

An untrained rabbit can and probably should, be kept in a cage while you're not home to supervise. Rabbits are crepuscular, which means that they generally sleep during the day and during the night but are ready to play at dawn and at twilight. So if you're at work during the day, they won't mind so much being in a cage. But they must be let out for at least several hours each day, both to exercise and to have social interaction with you.

Confined To a Room or Cage Only While You're Away

Bored rabbits become naughty rabbits. If you're not around to talk to or pet your rabbit as you prepare dinner, watch TV or just read, your rabbit will become very bored. That's when rabbits generally get into trouble, by digging in the carpet, chewing on forbidden objects or eating your leather couch. A very large hole can appear in the carpet in just a few minutes time. The younger rabbits are generally the ones that get into this type of mischief. So even if your rabbit starts out this way, you might check every few months to see if she can earn more freedom as she ages. Often the bathroom, laundry room, kitchen or a

bedroom are good, safe places to confine your rabbit while you're away. These rooms are easy to rabbit proof. If none of these rooms are practical then you'll probably have to consider a cage of some sort.

RABBIT LITTERBOX TRAINING TIPS

Are your rabbits' previously pristine litterbox habits changing for the worse? Has your rabbit decided your entire house is now his litterbox?

First, determine if the reason could be medical, perhaps a bladder infection.

A trip to your rabbit's veterinarian may be in order to detect a urinary illness.

What is the age of your rabbit? Do not expect a baby bunny to be totally litterbox trained, they are still young. That would be like expecting a newborn baby to be toilet trained. Their bladder control increases as they mature. Be patient with very young, unaltered rabbits.

Is your rabbit spayed or neutered? When rabbits reach the age of 4-6 months their hormones become active and they usually begin "marking their territory". By spaying or neutering your rabbit he will be more likely to use the litterbox and will be a happier, healthier, calmer rabbit.

Decrease freedom and increase litterboxes. Do not give your rabbit total freedom of the house. When you decrease his freedom and increase litterboxes, you are increasing his chances he will make it to the litterbox. Keep two or more litterboxes outside the cage and one inside the cage. As his habits improve, you can decrease a litterbox or two. If you have more than one rabbit, you may see less control and more marking, If slip-ups begin, start shorter periods of freedom and more litterboxes.

Keep litterboxes very clean. Rabbits are very clean creatures. A smelly soiled litterbox could cause your rabbit to choose another place to do his business sometimes just outside the box. Depending on the number of rabbits and litterboxes, clean litterboxes at least once a day. Once a week is NOT enough!

Spritz litter pans with white vinegar to clean and deodorize. Let pans soak if there is urine build-up and then rinse clean. Do not use chemicals. If your rabbit marks an area, blot up the urine and dab on white vinegar or a commercial enzyme deodorizer to neutralize the odor. Do not leave the smell or he may be encouraged to revisit.

Try a different litter. The House Rabbit Society suggests one of the many organic paper litters available. Sometimes the strong scent of litter will keep bunny out of the box. Avoid pine and cedar shavings and clay cat litters. Also try a handful of fresh hay in the box. This will usually entice Bunny to get into the box. You can also put a few of his droppings in the box, but just a few!

Be consistent. Get your rabbit into a daily routine and try not to vary it. Rabbits are very habitual and once a routine has been established, they usually prefer to stick with it. Routines make learning easier.

Adapt to the stubborn bunny. If your rabbit is continually going in an opposite corner from his box, put his box in the area he has chosen, even if it means rearranging his cage or moving a table in the living room. He has already decided where he wants his box and it is much easier to oblige than to try to work against a determined bunny!

HOUSE RABBIT SOCIETY 9/96

House Rabbit Society

Litter-Training Your Bunny

By nature, rabbits choose one or a few places (usually comers) to deposit their urine and most of their pills. Urine-training involves little more than putting a litterbox where the rabbit chooses to go. Pill training requires only that you give them a place they know will not be invaded by others. Here are some suggestions to help you to train your rabbit to use the litterbox.

Age. Older rabbits are easier to train than younger rabbits, especially babies. A rabbit's attention span and knack for learning increases as they grow up. If you have a baby, stick with it! And if you are deciding whether to adopt an older rabbit, or litter train your older rabbit, go for it!

Spay/Neuter. When rabbits reach the age of 4-6 months, their hormones become active and they usually begin marking their territory. By spaying or neutering your rabbit, he will be more likely to use his litterbox (as well as be much healthier and happier).

Types of litter. House Rabbit Society recommends organic litters, made from alfalfa, oat, citrus or paper. (Some brands to look for: Care Fresh, Citra Fresh, Cat Works, Cat Country, Critter Country) Stay away from litters made from softwoods, like pine or cedar shavings or chips, as these products are thought to cause liver damage in rabbits who use them. Another approach is to place a handful of hay in each box, or to simply use hay as litter. Obviously, you need to change the hay fairly frequently (daily), since your rabbit will be eating it.

Cleaning and Disposal. Clean litterboxes often, to encourage your rabbit to use them. Use white vinegar to rinse boxes out--for tough stains, let pans soak. Accidents outside of the cage can be cleaned up with white vinegar or club soda. If the urine has already dried, you can try products like "Nature's Miracle" to remove the stain and odor. To dispose of organic litters, they can be used as mulch, or can be composted. Rabbit pills can be directly applied to plants as fertilizer.

The cage. Use a cage large enough to contain a small litterbox (along with bunny's food and water bowls, toys, etc.) and still allow enough room for the rabbit to stretch out.

Place the box in the corner of the cage that he goes in. With a litterbox in the cage, when the rabbit is confined to his cage when you're not home, cage time is learning time.

Pills vs. Urine. All rabbits will drop pills around their cages to mark it as their own. This is not failure to be litter-trained. It is very important for your rabbit to identify the cage as her property so that when she leaves the cage for the bigger world of your house, she will distinguish the family's area from her own and avoid marking it. To encourage this, make the rabbit the king of his cage. Try not to force him in or out of it--coax him. Do not do things to his cage that he doesn't like, or things to him that he doesn't like while he's in the cage.

SAFE GROOMING & HANDLING TECHNIQUES

Rabbits can act as if they're hardy creatures, but they are, in fact, extremely delicate--from their skin to their spines to their external systems. Care must be taken to maintain their good health. The following basics are necessary to know in order to groom rabbits safely and to help keep them healthy. For information specifically geared towards the caring for long-haired rabbits, see the reprint of the *House Rabbit Journal* article, "The Well-Groomed Rabbit."

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Shedding

Rabbits shed every 3 months. Every alternate time they'll have a light shedding that may not be very noticeable. Next they'll have a heavy shedding that you will not be able to escape.

Rabbits are fastidious groomers. They insist on being clean & tidy and will lick themselves like cats. And like cats, they can get hairballs if they ingest too much hair. Unlike cats however, rabbits cannot vomit. If hairballs are allowed to form they can become gigantic masses of tangled hair & food and will block the stomach exit, causing the rabbit to starve to death while his stomach appears to be very fat.

Rabbits need to be brushed at least weekly. In addition to removing any loose hair, this weekly brushing session helps prepare them for the multiple daily brushing that they must undergo when their heavy shedding begins. Rabbits will shed in different ways. Some rabbits will take a couple of weeks or more to lose their old coat of hair. Other rabbits will be ready to get rid of their old coats all in one day and these rabbits are the ones that cannot be neglected once they start shedding. You can often remove a very large percentage of hair by just pulling it out with your hand. But, however you remove it, remove it as soon as possible or your rabbit will do it during grooming.

Bald spots on rabbits are quite common when they are shedding. I have one Angora rabbit for instance, that gets totally naked except for her face and feet. But, short haired rabbits can do the same thing. If these bald spots occur from shedding, they will begin to grow back within a week or two.

Long Haired Rabbits

These types of rabbits are tidy wonderful to look at, but require a lot more attention than their short haired cousins. As a house pet, we recommend that you use your scissors and keep their hair trimmed to one inch or less, otherwise you may be fighting hairballs most of the time.

EXPERT HELP: If you are not comfortable with the above you can have someone, may be your veterinarian show you how to do all of the above tasks.

Fleas

Cat flea products are generally safe for rabbits with fleas. It's better to stick with powders and sprays. Carbaryl is the ingredient preferred by the House Rabbit Society's veterinary advisors. One must be hesitant to treat rabbits' fleas aggressively, because the cure can be more stressful than the infestation, so flea baths and dips are not recommended.

A flea comb is a non toxic device, which takes more patience, but is both physically and psychologically rewarding. Most rabbits learn to love the attention of being flea combed, and it can be used as a supplement to or as your main flea-control program. If you wait to control fleas in the environment with sprays or a flea bomb, do only one room at a time and keep your rabbits out of that room for at least 24 hours.

Baths

Although some bunnies grow up swimming in the family pool and going on camping trips where they paddle around in the lake, most rabbits are not used to this routine and would find even an occasional bath quite stressful. NEVER-unless your vet advises it to bring down a fever-should you give a sick rabbit a bath. Because seemingly healthy rabbits can have undiagnosed problems, it's best not to subject them to the stress of a bath. If your rabbit is very badly infested with fleas, there's a good chance that he is already compromised and may go into shock when bathed. Also, a thoroughly wet rabbit takes a very long time to dry, so spot cleaning the dirty area is better than an over all bath. Normal

rabbit body temperature is 102 degrees. Since they are subject to heat stress use a warm dryer, not hot.

Mats

Rabbit skin is delicate and highly susceptible to cuts, so mats should not be cut off with scissors. Instead, use a mat splitter or mat rake to take the mass apart. Bunny fur usually requires a finer blade than most cats and dogs.

Skin

Scratchy, flaky skin with bald patches is usually a symptom of skin mites or an allergic reaction to fleas. Cat flea powder clears up either condition. A vet should be consulted for other skin irritations.

Feet

House rabbits who spend all of their time in homes with carpeting and linoleum periodically need to have their toenails trimmed, in the same way as dogs and cats.

Because of risk of infection, declawing is definitely NOT recommended for rabbits.

If excessive digging or scratching is a problem, then a large box of hay or straw, where bunny can pursue these activities, may help.

If the padding (fur) on the feet is worn down, exposing inflamed or callused skin, then soft dry resting pads (rugs) should be provided. Exposed skin that becomes urine burned or broken is very likely to infect. Take extra care that rugs and litterboxes are kept clean and dry.

Incontinence

A rabbit with urinary infection or a disabled older rabbit may not be able to protect urine away from the body. The result may be saturated fur around the hindquarters. For milder cases, shave the areas that get wet so the skin can dry (remember, rabbit fur takes a long time to dry), rinse the affected areas daily, and follow up with a dusting of baby powder or corn starch. For more infirm cases, disposable baby diapers-turned backwards so the tabs are up-do wonders for keeping the moisture away from the skin. (Huggies Step 2 work well for an 8 LB rabbit.)

Ears

Ear wax can be lifted out with a cotton swab, being careful not to push on wax in the canal, or you can try a mild ear cleaner containing Chlorhexadine, such as Nolvasan Otic. For ear mite infestation, apply a topical medication such as Mitox. The vet may also prescribe Ivermectin.

Teeth

Rabbits teeth grow continuously and must be checked to ensure that they are wearing down properly. While you're brushing your rabbit or clipping his nails also look at his teeth to make sure there is not a problem.

Bunnies with straight teeth will keep them worn down with everyday gnawing and chewing. Buns with malocclusions, or crooked teeth, will need to have their teeth kept trimmed with guillotine-type clippers. If this occurs and is left untreated, the rabbit will not be able to eat and could starve to death. Your veterinarian can show you how to clip a rabbits teeth or they can clip them for you.

Nails

Rabbits nails can grow to be very long and sharp and will be uncomfortable for the rabbit If the rabbit has light

People are often afraid to clip nails for fear that they will cause the rabbit to bleed. You can purchase a product called Kwik Stop to keep on hand for this problem, but I've found that just holding pressure with a cotton ball works better for me. Your veterinarian will also clip nails for you. They should be checked every 6-8 weeks.

Eye Discharge

Watery eyes or and eye discharge needs to be diagnosed by a vet. In addition to any medications or eye drops, the cheek needs to be kept dry and clean so the area will not become chafed nor the fur peel off. Clean tissues will absorb mild wetness. Ophthalmic saline solution (what people use with their contacts) carefully poured onto the cheek will crystallize the tears so that they can be removed with a clean flea comb. A touch of prescription anesthetic powder on a ringer can be applied to the area if there are painful lesions.

Approaching a Rabbit

The safest initial approach with rabbits is to begin by stoking the top of the head. Do not offer your hand for a bunny to sniff the way you would to a dog, because most seem to find this gesture offensive and may attack (lightening fast lunge with a snort). Most buns also do not Like having the tips of their noses or chins touched. Their feet also tend to be ticklish.

Hypnosis

Often a bunny can be 'hypnotized' by cradling him on his back in your arms or across your lap, tipping the head backwards until he's "out" It's helpful to do this when cleaning bunny's sensitive areas, like the face. feet, or under the tail, If the hind feet seem to be vibrating, touching them will stop it.

Lifting

Bunnies should not be lifted by the ears or scruff See the HRS handout, "Getting off the Ground," for safe ways to lift and carry rabbits.

Compiled with the assistance of Dr.Carolynn Harvey, DVM

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Rebel with Paws

Amy Shapiro

I don't understand it. Just this week, Fluffy has bitten the kids five times." "I don't understand it. Peanut used to be so good about using his litterbox. Now he's leaving messes everywhere." "I don't understand it. Flora was such an easy-going little bunny. Now all she does is dig, dig, dig. My carpet is in shreds."

"Why does Felix keep running in circles around our legs all the time?"

"The other day I found Josie pulling out her own fur and running around the house with it in her mouth!"

Adolescence-or at least the outward manifestations of it-can strike bunnies almost overnight. Your fluffy' little darling's hormones switch on, and she enters a phase that can transform her and mystify the unprepared human. Here are a few of the ways to recognize, understand, and deal with your teenager.

WHEN

Adolescence can begin as early as three months, especially in the dwarf breeds. Five to six months is the more common starting point. Generally rabbits make the transition from adolescence to adulthood at about one year.

WHO IS THIS LONG-EARED TERROR?

It's no surprise that the majority of rabbits surrendered to shelters are between six and twelve months of age. In some cases, of course, the reason is that the novelty and cuteness factors have worn off. But more often Thumper's sudden change from easily controlled to impudent and assertive convinces people that they have a "mean" or "bad" rabbit. Very few of these lunging, chewing, digging, nipping guys get adopted, and what is a normal, natural, and necessary phase of life becomes a fatal disease when Thumper gets euthanized.

The key word here is phase. If you and Thumper manage to survive adolescence together, you will find at the other end of the experience a larger, calmer version of your pre-adolescent pal. If you're adopting a six- to twelve-month-old rabbit, you can assume his adult personality will be a less exaggerated version of his teenage self. When I rescued Daphne, she was a confident, affectionate eight-week-old baby. When she was about six months old, it occurred to me that she was no longer following me from room to room; she was chasing me, chin thrust forward, tail up, occasionally nipping my ankle if I didn't move fast enough for her satisfaction.

YOUNG LUST

As with humans, sexuality plays a major role in the behavioral changes that accompany adolescence. These may include spraying urine, circling, mounting, nipping, nest-building, extreme mood-swings, digging, and fighting between previously friendly rabbits (especially males). The simple cure for all of these activities, discussed in an earlier issues (Vol. 1, ~1 & Vol. 1, p2), is to spay/neuter your rabbit. General age guidelines are four

months for males and six months for females. According to Dr.Carolynn Harvey, males can be neutered as soon as the testicles descend. “If I can see them, I can remove them,” she assured me, when I called her about the two ten-week-old brothers I’d rescued who were remorselessly mounting their two sisters and terrorizing all of our cats.

Because there is a social as well as a sexual component to many of these behaviors, and because it takes time after surgery for the hormones to stop circulating (usually two weeks for males, as much as six months for females), surgery is not an instant cure. But it is a necessary part of surviving adolescence. There are no physiological or behavioral disadvantages to spaying and neutering. And no discussion would be complete without mentioning the enormous ethical advantages. With rabbits being euthanized daily at shelters across the country, and thousands more being “set free” in fields or vacant lots, it’s difficult to reconcile a love of rabbits with bringing more of them into the world. Killing—even a gentle death at the hands of a caring shelter worker—and abandonment are not acceptable methods of population control.

SURVIVAL TECHNIQUES

So you’ve had Flopsy spayed. She’s still digging your carpet, eating your rattan love seat, biting the kids when they reach into her cage, and leaving liquid and solid calling cards all over the house. The first step is to get out your old HRJs and read the relevant articles on chewing, digging, housetraining, etc. As You read, a few underlying concepts will emerge from the specific suggestions.

- 1) Redirect. It’s much easier to tell a rabbit “Chew this” (“and this,” “.., and this,”) than to try to convince him not to chew anything. Look for ways that Thumper can indulge his natural inclinations -whether for chewing, digging, mounting, etc.-in ways that don’t drive you crazy. Meet him halfway. Remember that from his point of view, he’s being a very good bunny. Adolescent rabbits are supposed to chew, dig, mark their territory, and mount everything in sight. It’s only our human perspective that puts a negative spin on the situation.
- 2) Set her up to succeed. Punishment doesn’t work very well with rabbits, especially sassy teenage rabbits. Instead, put Flopsy in a situation where her options are limited to doing the right thing—that is, the human version of the right thing, such as digging in her sandbox instead of your carpet. Setting up for success often includes limiting and structuring her physical environment.
- 3) Be patient. She will outgrow all this mania. Enjoy her exuberance, laugh at her mischievousness, ponder the complexity of the rabbit psyche. Allow yourself to be infected by her joy at being alive and obnoxious and pushy. Once you’ve seen a rabbit kick up her heels, shake her head, leap straight up in the air and make a 180-degree turn before landing, you’ll know you’ve been initiated into a very select society. And you’ll remember why you put up with all the other stuff

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Rabbit Nutrition: Facts and Fallacies about Treat Foods

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That cute little whiskered face is so hard to ignore, especially when your bun sits up and looks so deserving of that special treat. And pet stores sell a selection of rabbit treats which are perfect for your precious rabbit. Right? WRONG!!! Most so-called rabbit treats are the equivalent of taking your rabbit to McDonald's, providing non-nutritious junk that can cause potential harm to your rabbit. Confusing the issue is that many of these products use phrases that lead the buyer to believe that the product is healthful: "nutritionally fortified," "doing right for the environment," "natural feeding habits," "for nutritional variety," "the finest selected ingredients." The addition of "feeding instructions" and "guaranteed analysis" lend a cache of authority.

Commercial rabbit treats fall into several categories: pellets, processed cereal kibble, mueslix (dried seed/fruit/veggie mixes), cereal/veggie blends, and candies/sugars. None confer an advantage over the fresh vegetable, high fiber pellets, and unlimited hay diet.

Pellets were discussed in the House Rabbit Journal vol. III #4. I won't say more here except to repeat those guidelines: chose a pellet that is high in fiber (20-25%) and low in protein (14-15%) and calcium (<1.0%). Restrict pellet feedings to HRS guidelines and feed plenty of fresh vegetables and unlimited hay. Do not buy a pellet that contains seeds, nuts, or starch-rich cereal kibble mixed in (see below).

Processed Cereal Kibble. These range from "Crunchy Puffs" to shaped products designed to substitute for pellets. Some contain expensive extras that serve no benefit to your rabbit, such as plant or herbal extracts and freeze dried bacteria. One contains less than the National Research Council (NRC) requirements for calcium. Another contains cheese flavoring! Supplementation with digestive enzymes (proteases, amylases) normally is unnecessary because these foods are highly digestible and because there is no evidence that healthy rabbits produce insufficient levels of these enzymes; in fact, some of the most important digestion is by the cecal bacteria. These kibbles tend to be lower in fiber and higher in fat. They are also extremely expensive and come with feeding recommendations destined to give a spayed or neutered house rabbit obesity. The variety of colors and shapes are more of an aesthetic to the human buyer than to your rabbit. Again, fresh vegetables, restricted high fiber pellets, and unlimited hay are healthier and easier on your budget.

Mueslix. These are mixes which are made of seeds and grains. They are marketed as "vitamin and mineral enriched," a "delicious energy provider," or "fortified." They are made of carbohydrate and fat-rich seeds and grains such as oats, milo, corn, peas, sunflower seeds, potatoes, peanuts, puffed corn, cornflakes, popcorn, and dried fruits. They are often held together into "sticks" with honey and other sugars, and are marketed with the explanation that they supply needed energy and reflect the rabbit's normal diet.

In reality, a diet of vegetables, hay and restricted pellets provides all the nutrients and energy your house rabbit needs. Seeds are high in fat and are important for wintering animals. Your house rabbit has no such need; in fact, the National Research Council recommends that domestic rabbits receive no more than 1.5% of their calories as fat. Labels on the back of these mueslix products list a minimum fat content of 4-5%; the real value is probably greater. Rabbit metabolism is geared for a low fat diet (in comparison, the average

human diet contains 35-40% fat!), and the excess is not burned but is stored as body fat. Rabbits appear to be more sensitive to fat than are humans, and in addition to obesity, the excess fat can accumulate in your rabbit's liver and arteries (atherosclerosis). Veterinarians have reported that rabbits fed seed-rich diets have a much higher incidence of fatty liver disease (hepatic steatosis), which is often fatal. These seeds and grains are also rich in starches. While some of this starch is digested in the small intestine, much of it is not accessible until it reaches the cecum. There it becomes a potent energy form for the cecal bacteria; unlike cellulose fiber, which slows fermentation, starch in the cecum is fermented rapidly and can lead to bacterial overgrowth, bloat, and gi stasis.

Manufacturers claim that seeds and grains satisfy "the chewing urge." While this is true, it is far safer and cheaper to satisfy that urge with baskets, untreated wood, and cardboard boxes.

Cereal / veggie blends. These are grain products which may be supplemented with dehydrated vegetables, and shaped into a form which mimics a vegetable product. There is no advantage to feeding these over the real vegetable. One product label lists three different cereals before the dehydrated vegetable! The high carbohydrate content of these snacks means they are robbing your rabbit of important fiber and overloading him with sugars. These products also tout the vitamins that are added back (due to processing); real vegetables will supply as much if not more. With 2.1 ounces costing \$3.09 (\$24 per pound), a pound of carrots and some cardboard provides a healthier and cheaper alternative.

Candies/Sugars. These can include everything from yogurt drops to sweetened papaya tablets. The high sugar is the culprit here. Many rabbits have a sweet tooth, but sweetness means a high content of sugars. As we discussed above, excessive sugar is converted to fat, or will pass into the cecum where the bacteria will use it for energy and then rapidly overgrow, possibly leading to bacterial imbalance and gi stasis. The same can occur after feeding too much fruit. Avoid feeding your rabbit simple sugars and instead stick with nutritious treats such as vegetables and herbs; save the sweets for an occasional raisin or banana snack.

Vitamin supplements. These are largely unnecessary. For nearly all rabbits, a diet containing a variety of fresh vegetables, restricted high quality pellets, and unlimited hay provides all the vitamins your rabbit requires; many of your rabbit's vitamins come from her normal ingestion of cecal pellets. While special health situations may require nutrient supplements, these are best handled after consultation with your veterinarian.

It is tempting to show your love for your rabbit by purchasing treats for her. If you are in doubt, read the ingredient label; pay particular attention to the list of ingredients (they are listed in order of abundance) and the percentage of fiber and fat. Speaking as a nutritionist, my best advice is to save your money and show your love with healthy treats like vegetables, hay and untreated wood for chewing. And give plenty of pets, which are of course free.