



House Rabbit Network

P.O. Box 2602

Woburn, MA 01888-1102



Dedicated to educating the public and to fostering and adoption of companion rabbits. 781-431-1211 or www.rabbitnetwork.org.

RABBIT TRACKS

Winter 2006

Love is in the
Hare



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Dental Disease in Rabbits

by Alexandra Kilgore, DVM

Today, dental disease in rabbits is a very commonly diagnosed problem and is now recognized as the underlying cause of numerous other disorders. For this reason an understanding of dental health and physiology are crucial for veterinarians that treat rabbits and for rabbit owners alike.

Rabbits are herbivorous, naturally eating a wide variety of vegetation and roughage. A unique feature of rabbits is that all of their teeth are open rooted which means that their teeth grow continually throughout their life. A healthy rabbit eating a proper diet constantly chewing will wear down the teeth as they grow.

Signs of dental disease

Signs of dental disease are very broad and may be non specific. Early signs can be subtle and may not be immediately noticeable to the rabbit owner. The rabbit may change its food preferences, stop eating certain things that may be difficult to chew, or drop food from its mouth. The rabbit may have some weight loss or may look unkempt from a change in grooming habits, especially if the incisors are overgrown. Advanced signs of dental disease may be excessive salivation, loss of appetite, malodorous breath, and severe weight loss. Also, the rabbit may present for another problem such as GI stasis, an abscess, or an infected tear duct, all secondary to the primary dental disease.

Causes of dental disease

The most common causes of dental disease in rabbits are genetic and dietary. Genetic predisposition is very common. Unfortunately with inbreeding, some rabbits are born with malocclusion. This is commonly seen with the incisor teeth which overgrow and curl around when they do not meet properly. These rabbits often need to have their teeth trimmed every 1-2 months or have the incisor

teeth extracted. Some rabbits are born with elongated skulls which also leads to dental occlusion problems. Another common cause is diet. Many rabbits are primarily fed a diet of pellets. Because the pelleted food is dense in nutrient content and is already pulverized, the rabbit chews less. Rabbits' molars curl as they continually grow. With decreased wear from less chewing, the lower molars develop points that grow into the tongue and the upper molars develop points that grow out into the cheeks. These changes occur gradually with time and can lead to many secondary problems including abrupt loss of appetite

and infections. Acquired dental disease with deterioration of the tooth quality, malocclusion and elongation of the roots with periapical abscesses is another form of dental disease in rabbits. Metabolic bone disease, genetics, and diet are all proposed causes for this problem.



Rabbit with severely over grown incisors.
(Inset Photo: Rabbit with single over grown incisor.)

Diagnosis

Because dental disease is so important in rabbits, a dental exam should be a part of the annual physical examination. As part of the exam, the veterinarian will check for the overall body condition, the condition of the coat, drainage from the eyes, swelling under the jaw bone, and saliva staining of the fur under the chin, which can all be indications of dental disease. The incisor teeth are checked by lifting the lips to check their length and occlusion. The sides of the cheeks are palpated for any sharp protrusions. The veterinarian will insert a speculum

and/or an otoscope to visually evaluate the molars. Very often the veterinarian is able to see points or spurs on the molars and will recommend a more complete dental exam and filing of the molars under anesthesia based upon his/her observations.

The dental examination under anesthesia can be performed safely after a preanesthetic blood profile and full exam are performed to be sure that the rabbit is in good health and low risk for anesthesia. The anesthetic agents are chosen based upon the age and health status of the rabbit, the length of time of anesthesia and the expected difficulty. Pain medications are also utilized to decrease the stress of the procedure and improve the rabbit's recovery. Specialized instruments are utilized to visualize the oral cavity including cheek spreaders, an incisor speculum, and a



View of rabbits mouth during dental procedure.

special light source. Special diamond files, rongeurs, and straight dental burs on a low speed drill are used to remove points and file the teeth down. In recent years a

system for grading the extent of dental disease based on radiographs has been developed. While under anesthesia, the x-rays may be taken to evaluate the tooth roots for elongation and periapical abscesses.

Treatment

Treatment of dental disease will depend on the stage of the disease at the time of diagnosis. In all cases, rabbits that are severely debilitated from anorexia, GI stasis, or severe infection will need to be stabilized first. Administration of fluids, maintenance of body temperature, pain medications and antibiotics may be the first steps along with restoring adequate nutrition. Once the rabbit is stable, it may safely undergo anesthesia for the dental exam.

For severely overgrown incisors, a dental drill can be used to trim the incisors. This is a problem that tends to be chronic and repeat trimmings at regular intervals are needed. For some rabbits the best option is to extract the incisors. Incisor extraction is a major surgical procedure and is done under anesthesia. The two long upper and two long lower incisors and the two upper peg teeth are extracted with special elevators. The rabbits are sent home on antibiotics, pain medications and some soft food for a few days. Fortunately the rabbits are able to prehend food with their lips and do well with this procedure after a few days of nursing care.



Instruments used in rabbit dentistry.

Blocked tear ducts are another problem seen in rabbits with overgrown incisor roots. The tip of the root is very close to the tear duct so inflammation or elongation of the root can cause a blockage. The owner will notice tears and sometimes pus spilling onto the face from the eyes. To diagnose this problem an x-ray contrast medium can be instilled into the duct and an x-ray taken to demonstrate the blockage. Another test is to place fluorescein stain solution into the eye and check with a UV light for the dye passing out of the nostril. This is a difficult problem to treat. Sometimes, the tear duct can be flushed while the rabbit is awake or under anesthesia and the drainage can be restored. Repeated flushing may be needed. Often the veterinarian will prescribe an antibiotic ointment to help prevent an infection. The owner should keep the area under the eye clean and dry to avoid secondary infection.

For severely overgrown molars or molars with points, a low speed dental drill with a straight dental bur can be used to file down the molars and correctly reshape the teeth. Periapical infections of the molar roots are common in acquired dental disease and often lead to the formation of abscesses

and infection in the surrounding bone. If an abscess is present, surgical treatment is required to remove the entire abscess and the capsule. Involved bony tissue should be debrided. Antibiotic impregnated beads or antibiotic saturated umbilical tape drains can be placed into the abscess cavity. Sometimes intraoral extraction of diseased molars is also necessary along with flushing of the root socket.

Prevention

Unfortunately most dental diseases in rabbits tend to be chronic. Exams and filing need to be done on a regular basis and infections treated promptly. The best way to prevent dental disease is to make sure the rabbit is on a proper diet with good quality hay and leafy greens offered every day. Avoid feeding mainly pellets. Be aware of the many signs of dental disease and

call the veterinarian promptly if a problem is suspected. Regular yearly physicals with a dental exam are essential and allow early diagnosis of a problem and the best prognosis for resolution.



Dr. Alexandra Kilgore is a veterinarian at Littleton Animal Hospital in Littleton, MA.

Sabrina's Story

by Liz McGovern

"Ian!" I cry through the phone. "I think someone switched bunnies on me!"

"Liz," he whines back. I can tell he is tired of this conversation, but I can't let it go. I really do believe someone switched my bunny with another. "She's just a happy bunny!"

I bend down and sneak a peek under the bureau at a white ball of fur with accentuating brown markings. She wriggles her nose, stands, stretches, and darts out into the open space. Halfway across the floor she stops and stares at me before running back to her place under the bureau and grabbing a colorful plastic toy in her mouth. She tosses it, and the sight is too much for me to bear.

"Ian!!!"

"What?"

"She's playing!"

"See! She's just a happy bunny."

And I hope she is.

In February of 2005, I attended my first House Rabbit Network Meeting. I had decided to lend my knowledge of bunnies to an organization looking out for the welfare of rabbits. After I lost my first rabbit, the thought of not participating in the lives and development of rabbits became intolerable, but I knew I wasn't ready to adopt. I knew I couldn't, and I knew I wouldn't. The pain of Seymour's unexpected death twisted inside me and the idea of taking in another rabbit caused tears to well in my eyes. Even as I pet some of the rabbits in the foster home, I felt my heart breaking.

A month later found me in a basement with Suzanne and Helena, cleaning cages. I was amazed at all the nuances and differences in personalities. I awed at the way each little one responded to tones of voice and pets. Some greedily poked their heads out. Others stood and surveyed from a distance, but

the one that caught my attention was the one sitting in her litterbox as I reached in for it. Without a fuss, she hopped out, stood up with her brown ears stretched to attention.

"I don't remember meeting you last time I was here! You're so cute!"

Her left ear cocked back as her right ear cocked forward. I stroked that special place between her ears (all bunnies have it!) and simpered as I heard some gentle, purring clicks. I called out to Suzanne and Helena on the other side of the room, "I hear happy noises!"

Helena looks up and says, "That's great! I remember when Sabrina first came we couldn't even pet her! She darted back and forth in her cage, 'Don't pet me! Don't pet me!'"

Once the chores had been completed, Helena and I spent some time just being with the bunnies, and compelled by an indefinable urge, I spent most of my time next to Sabrina's pen. Before I even

knew what I was doing, I lifted the little princess out of her confines and held her in the crook of my elbow. Her red eyes stared up at me with a look I had seen before in the children I kept company when volunteering in Maine Medical Center's children's ward: "I want to go home. I trust you to get me there."

But I couldn't take a bunny home . . . I don't have a job . . . I don't have the space . . . I'm barely keeping myself together. It would be nothing short of irresponsible for me to adopt an animal right now — especially one who needs as much attention as this one.

"Hello? May I speak with Suzanne?"

"Hi."

"I've been thinking about Sabrina all day.....I'll take her."

"Oh, that's awesome!"

Close to three weeks later (April 27th, in fact) found Sabrina in the kitchen of my small apartment in Somerville. My roommate Tope and her fiancé David sat in the living room while my boyfriend Ian and friend Jeff cut wood, hammered nails, and drilled in screws to loft my bed. I attended an event at Tufts with Suzanne, and when I arrived home several hours later, I had one angry rabbit on my hands. I can't say I blame her because a long trip that ended in such a chaotic environment would have had me at my wits' end as well. At the end of the day, Sabrina was in her new pen and took her rightful place as the monster under my bed.

The past seven months has yielded a great many changes. Sabrina and I have learned how to communicate. I have learned that if she jumps at my hand with her paws, I should lower my hands down and ask her what has her so upset. She pauses, looks at my hand, and resorts to a grunt when I remove her water dish. I have learned that she would prefer it if I take off any bracelets when



Sabrina

petting her and that if she appears in any way to be aggressive, it is because she is afraid something belonging to her will not come back. But learning these very minute nuances of character and action came over time. The first three months, Sabrina wanted nothing to do with me. She would come out of her pen and tentatively explore the hallway. If I caught her cleaning her face, playing with a toy, eating, drinking, or behaving in any other bunny manner, she would immediately stop what she was doing, and sit quietly, one ear cocked forward, one ear cocked back. I decided the only way this

relationship would work is if I inflicted attention on her — a little at a time. I made it a point of petting her once a day, and only once. When she would leap at my arm in anger or defense, I would gaze incredulously at her and say, "I'm not afraid of you, Missy!" I cleaned her pen when she was out exploring, and I purposefully put her toys back in different places so she would have to rearrange her house to her likings again.

For awhile, Sabrina's aggressive behavior escalated. She knew what belonged to her, and she was bound and determined to protect it at all costs. I didn't go a day without hearing the livid guttural noises rumbling from her belly and into her nose.

I couldn't escape a day without a new scratch on my hand. When I would give her treats, she would attack my hand until the treat lay on the ground. But she wouldn't touch it until I turned away. After several weeks I made a resolution: I would not give up on her. I refused to give her treats if she couldn't take them nicely. She could paw at my fingers all she wanted, but she would not get the treat until she could learn to take it nicely with her mouth. Around two weeks after I started this method of treat-giving, Sabrina's grunts decreased in animosity until they almost disappeared. When I sensed that she had given in to my way of handling her, I began to offer her pets as she nibbled on her dried cranberries. The first day or two led to a shocked expression in her bright red eyes, and she made a point of running away as soon as she had swallowed


her dessert. A few days more and I could pet her before giving her the treat.

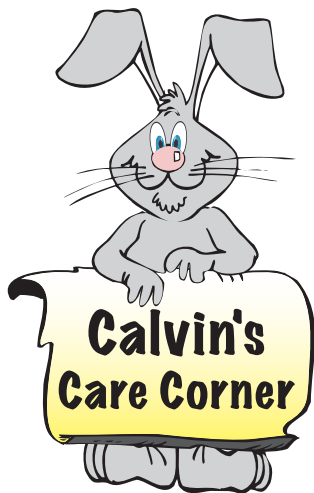
I don't know what happened to Sabrina that made her so aggressive and angry, but I have some theories. Some of it is just her, and that's okay. But a good portion of it had to have come from elsewhere. While Sabrina has learned to enjoy a little attention, she will never be a rabbit who enjoys lots of attention. I wonder if her earlier life involved people acquiescing too much to her request to be left alone, resulting in a lack of attention in the end, or if just the opposite — she received too much unwanted attention that she started to repel it. I do not expect to ever fully know which way it was for

her, but I do know a quiet persistence was the way to gain her trust.

This last month especially has seen great improvements. Even my roommate, who has two mini-lops of her own, has noticed how Sabrina has become more brave, less aggressive and more responsive to people. Ian, when he visits, remarks how she grunts even less now than she did the last time. It's true she still wants nothing to do with sitters and will resort to misbehaving when I'm not around (just ask Helena and Shannon!), but would she be a bunny at all if she didn't? She throws her toys out in the open. She runs into the living room without a second thought to destroy an old chair that I still

have only because she enjoys destroying it. She has taken to letting me know when she disapproves of my reading material by sauntering over and pawing at the book. Just three weeks ago while reading Lemony Snicket's *The Penultimate Peril*, she took the corner of the book in her mouth and tossed it aside. She'll poke her face into mine, but when I reach to stroke behind her ears, she'll turn tail. But she doesn't mind so much when she's under the bureau.

We're still learning about each other, and we still have a ways to go, but mostly, we're content just to have the other nearby. A lost cause, after all, is still a cause. 



Water Bottles Versus Crocks

Welcome back readers! Calvin here, and I've been asked to respond to that age old question,

should rabbits have a crock or a water bottle to drink from?

There are good and bad features to both, so I thought I should explain the difference. Most rabbits will drink from either a crock or a bottle, but there are a few that will

only drink from one. If you get your rabbit home and don't see them drinking within a day, you need to purchase the other type!

Many people like having a crock for their rabbits. It is generally believed that most rabbits will drink more from a crock. If you choose to use one, you should get one that is sturdy. Lightweight bowls will easily tip over and spill, which not only makes a mess, but then your rabbit may not have water to drink. If you choose a ceramic crock, keep in mind that lead paint laws that apply to human products do not cover merchandise you purchase for your pet and some countries still use lead paints. You may want to con-

sider purchasing a sturdy ceramic bowl that was made for humans. If you see a crack or a chip, throw the crock out! Some humans don't like the crocks because it is easy to get the water dirty and because of that they might need to be changed more often. Then there



are the rabbits that enjoy throwing their toys into their water dish! The good side is that they are easy to clean and refill.

Bottles are another option. They are easy to hang outside the cage and the water stays pretty clean. You can fill a large bottle which will easily last an entire day. Make sure you

purchase one that has a round ball in the tube. Some have a metal stick/prong in the tube that rabbits need to push in with their tongues, and rabbits really don't like that. Some bottles will leak and they can lose their seal with time, so they need to be replaced more often. They are also more difficult to clean and fill.

Bottom line — both have good and bad features. It is really a matter of personal preference for both your rabbit and for you. Just make sure you clean and refill them every day!

Do you have a question for me?
Email: calvin@rabbitnetwork.org!

HRN News

Easter Awareness!

This year the House Rabbit Network is once again partnering with the Columbus, OH Chapter of HRS in the "Make Mine Chocolate" campaign. We are also using our own resources such as the Easter flyer on our website.

Since unwanted former Easter bunnies are a problem for virtually all rabbit rescues and animal shelters, the goal of this campaign is to address the problem at its source, by reducing the number of uneducated, impulse purchases of live rabbits as Easter gifts. This is a very difficult task, as the public is bombarded with this familiar symbol of Easter in television commercials, candy packaging, and toy stores.

We will once again be offering the "Make Mine Chocolate" pins on our website and at select locations. Sweatshirts, tee-shirts, and magnets will be available directly from www.makeminechocolate.org.

We need your help in making this campaign a success. Hang flyers (one is available on page 9) where

Make Mine Chocolate!™



Before you bring a pet rabbit into your home at Easter, please consider these facts:

- Rabbits are **NOT** low-maintenance pets! They require as much work as a dog or cat.
- Rabbits can live **8 to 10 years**, sometimes longer.
- The necessary spay or neuter can cost **\$100 or more**, and rabbits require routine veterinary care.
- Rabbits are not cuddly — they can become frightened when held!
- Pet rabbits cannot be set "free" — it's a death sentence.

they will be seen by parents (libraries, schools, day care), write letters to the editors of local newspapers and national magazines, ask local clergy to address the issue and tradition of "Easter bunnies", and sign up for education days at pet stores and community events!

Help spread the word — rabbits are NOT disposable pets!

Bunny Massage

For seven lucky rabbits, November 6 was a day of relaxation and tooth-purrs. At Especially For Pets in Medway, certified pet massage therapist Lynne Flanagan generously donated her time and talent by holding a

rabbit massage day to benefit HRN. Even though this was the first time most of the attending rabbits had ever received a massage, all relaxed under Lynne's gentle touch, and their enjoyment was evident. The event was even covered by the Milford Daily News, giving valuable publicity to the idea of rabbits as "real" pets.

Lynne's first experience with rabbits was at an HRN education day held at the same location almost a year before. She asked if she could try massaging the HRN rabbit in attendance, and has been working with rabbits ever since. The owner of "Paws That Matter Pet Massage," Lynne will travel to clients' homes to massage rabbits and other pets too. She can be reached through her website www.pawsthatmatter.com or by calling (508) 229-8302.

Lynne Flanagan massaging "Daisy".



Upcoming Education Events

Peabody Petco

Saturday, February 18
11:00 a.m. – 2:00 p.m.

Animal Spirit

Mass Avenue, Cambridge
Saturday, March 25
10:00 a.m. – 1:00 p.m.

Topsfield Petco

Saturday, April 8
11:00 a.m. – 1:00 p.m.

Parlee's Farm Easter Egg Hunt

135 Pine Hill Rd., Chelmsford
April 8 & 9, 10:30 a.m. – 2:30 p.m.
(weather permitting)

Education Events are announced all the time. Please do check our website regularly to see when we'll be at a pet store near you!

2005 Adoptions!

In 2005, HRN adopted out 110 rabbits to their new, forever homes! Let's see if we can add to that number in 2006. Check

out all of our available rabbits on our website.

HRN Merchandise!

Want to show your HRN pride? HRN has set up a CafePress site with HRN logo merchandise for sale. There are mugs, tote bags, a license plate frame, pillows, a teddy bear, tiles, stickers, magnets, caps, a large variety of clothing, and more! All proceeds benefit HRN. Go to www.cafepress.com/rabbitnetwork

Love is in the Hare

In this season of love, have you considered a pair of rabbits? Rabbits are social animals that love the

companionship of another bunny. Watching them snuggle and play together is a joy. They are clearly devoted to their mates.

The House Rabbit Network has many pairs of rabbits available for adoption. Adopting a pair of rabbits really isn't much more work than adopting a single bunny. Since the rabbits live together, you need only one cage, water bottle, food dish, etc. The buns share cage space, food, litter box



and play time. The benefit is that you get to enjoy watching them snuggle and love each other. Your buns will be happier!

If you have a single rabbit, have you considered getting a mate for your friend? Most rabbits are happier if

they have a friend to keep them company while you sleep and work. You can check out our handsome bachelors and pretty bachelorettes on our website.

In this season of love, consider adopting a pair of rabbits or a

mate for your current bun. You can have twice the joy!

You can purchase **Love is in the Hare** merchandise at <http://www.cafepress.com/lovehare>



"Love is in the Hare" sweatshirt and teddy bear. Just a few of the items available on CafePress.



"Couples" from House Rabbit Network that have found their "forever homes"!

This is a TOY



This is a COMMITMENT













Did you know:

- Rabbits are not suitable pets for young children.
- Most rabbits don't like being held and are easily injured if dropped.
- The average lifespan of a rabbit is 7–10 years.
- It is important to spay or neuter a rabbit, and provide veterinary care.
- Rabbits should be housed indoors and provided with a safe exercise space.

BEFORE YOU GET A RABBIT, GET THE FACTS.

For more information on rabbit care, get our *Bunny Basics* article, and introductory guide to rabbit care and behavior.

Visit our website at rabbitnetwork.org or call our Hotline at **781-431-1211**.

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Join HRN...or...Please Renew Your Membership

House Rabbit Network is now in its 6th year—and we continue to grow.

Through our network of dedicated volunteers and members, we are making amazing strides to improve the welfare of house rabbits everywhere. Your support can only further our goals, so become a member and get involved. *Visit our website to find out how to help www.rabbitnetwork.org.*

If you are not already a member, please join HRN!

Your membership dollars will go towards rescue and rehabilitation, community outreach and education, and veterinary expenses.



HRN Members: Hop to it — it's time to renew your membership!

Annual memberships run from April 1 to March 31.

Make 2006 a year of change — for you and for house rabbits alike!

Contact HRN at info@rabbitnetwork.org or (781) 431-1211.



House Rabbit Network Membership and Ordering Form

Your membership donation is tax deductible and will be used for medical costs (spays/neuters, vet bills) and education expenses. All members will receive a copy of our newsletter, *Rabbit Tracks*, when it is published. Currently, we are publishing three issues per year.

Memberships run from April 1 to March 31 (donations received in Jan.–March will be credited for the following year). To join, fill out this page and mail it with your check (payable to the House Rabbit Network) to:

**House Rabbit Network
P.O. Box 2602
Woburn, MA 01888-1102**

Choose your membership level:

- Dwarf \$ 15.00
- Mini Lop \$ 25.00
- New Zealand \$ 50.00
- Flemish Giant \$ 100.00
- Mix (other) \$ _____

Choose your newsletter delivery preference:

- PDF format via email
(significant savings for HRN)
- Hard copy via U.S. Mail

Please send me _____ copies of *Rabbit Health in the 21st Century*

2nd Edition
at \$20.00 each \$ _____

Membership: \$ _____

Other Contribution: \$ _____

Name _____

Street _____ Apt. _____

City _____ State _____ Zip _____

Phone _____ Email _____

Total: \$ _____