Runny Eyes, Runny Nose. What do They Mean?
by Dana Krempels

One of the most frequent questions I am asked via the House Rabbit Society's online Rabbit Health email link (health@rabbit.org) is, "My rabbit's nose and eyes are running. Did he catch a cold from me?" Fortunately, your bunny cannot contract a human cold, as the viruses that cause such misery in humans are not contagious to rabbits. (Note that rabbits can serve as vectors for such viruses. If you have a cold, be sure to wash your hands before you pet your bunny, lest you inadvertently share your "germs" with the next person who pets the bunny!)

As many people are all too aware, however, rabbits can suffer from sneezing, runny nose, and runny eyes. The particular cause of this in your bunny may require a bit of detective work on the part of your rabbit-experienced veterinarian, but the following information may help.

Upper Respiratory Infection ("Snuffles")

Rabbits can suffer from infections of the upper respiratory tract (the sinuses and other parts of the tract that are not actually parts of the lungs), and this is usually manifested as runny nose, runny eyes and sneezing. Unlike a human cold, which is caused by a virus, rabbit upper respiratory infections are caused by bacteria. The condition is commonly called "snuffles."

"Snuffles" is is a non-specific, "catch-all" term used to describe such symptoms without naming the specific cause.. Until fairly recently, many veterinarians believed that "snuffles" was almost always caused by the bacterial pathogen Pasteurella multocida, commonly found in rabbits (though often without causing any problematic symptoms at all). More recent information suggests that many different species of bacteria can cause "snuffles." Some of the bacteria most commonly cultured from rabbit nasal discharge include Pseudomonas aeruginosa, Bordetella bronchiseptica, and Staphylococcus aureus, though there are many others.

Because bacterial species (and their different strains) have characteristic sensitivity and resistance to various antibiotics, it is worth your investment to allow your veterinarian to positively identify the
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pathogen (i.e., disease-causing agent) your bunny has. The best way is via a CULTURE AND SENSITIVITY test. This laboratory test is the only way to determine (1) the species of bacteria causing the infection and (2) which rabbit-safe antibiotics will be most effective at killing them.

If your rabbit is sneezing and/or shows signs of nasal and/or ocular discharge, especially if such discharge is whitish and thickened, she needs to be seen by a veterinarian and have a sample of nasal discharge taken and sent to a laboratory for culture and sensitivity testing. Once your vet receives the results of the C & S test, s/he will be better able to prescribe the particular antibiotic (or combination of antibiotics) that should be safest and most effective for your rabbit's infection.

Antibiotic therapy may need to be continued for several weeks, and it should always be continued for several days after symptoms have disappeared to ensure that as much of the bacterial population as possible has been killed. Follow your veterinarian's instructions carefully, and be sure to complete the full course of antibiotics, even if the symptoms go away before the medicine is gone. The reason for this? Even the most effective antibiotics might not kill some of the more resistant bacteria right away. Removing the drug too soon will leave only these particularly hardy individuals to be the progenitors of the new population of bacteria in your rabbit's sinuses, and these will be genetically better able to resist the antibiotics you have been using (i.e., the population has evolved resistance to the antibiotics). Don't stop the antibiotics early, and don't put off treatment! A seemingly simple condition such as sneezing could develop into a potentially life-threatening problem, such as pneumonia or a systemic infection.

Lower Respiratory Infection

A rabbit with pneumonia may show symptoms such as loud, raspy breathing, and may point his nose high in the air and stretch his neck in an attempt to get more oxygen. A rabbit in this condition is critically ill, and in need of oxygen therapy at your veterinarian's clinic. Experienced rabbit veterinarians will often nebulize such a bunny with oxygen as well as products to open the airways (e.g., aminophylline) and to loosen the mucus and infective material in the lungs (e.g., acetylcysteine solution, brand name "MucoMyst"). In some cases, the veterinarian will add appropriate antibiotics to the nebulization mix, depending on what a culture and sensitivity test indicates.

Foreign Bodies

In some instances, a foreign object (such as a strand of hay, or a bit of food pellet) lodged in the nasal passage has been found to be the cause of runny nose and apparent chronic nasal infection. Sometimes such a foreign body is not visible without the aid of an endoscopic examination by your veterinarian. Once the item has been located, it is usually necessary to anesthetize the rabbit to allow removal of the object without danger.

In other cases, nasal polyps or other growths are found to be at the root of chronic upper respiratory symptoms. But surprisingly, one of the most common culprits causing chronic "snuffles" is undiagnosed dental problems.

Dental Disorders and Chronic Runny Eyes/Nose

Many people are surprised at how common dental problems are in rabbits, and even more puzzled to learn that such problems can cause symptoms such as runny eyes and nose. This is more often seen in older rabbits, as these have had time to develop molar spurs, or molar root problems that can cause inflammation or even develop into infections that spread to the sinuses.

In some older rabbits, gradual onset of metabolic bone disease results in loss of bone density (osteoporosis), especially in the already light bones of the skull. When this happens, the molar and/or incisor roots can very gradually be pushed into the thinning bone as the rabbit chews.

Because rabbit teeth grow continually, the visible portion of the teeth may appear entirely normal. It is only upon radiography that the root problem becomes visible as an intrusion of the tooth roots into the skull bones. This sometimes been called "root overgrowth," though the term is a bit of a misnomer. The roots are not actually "growing" into the skull, but are being pushed there.

(continued on page 4)
Miami’s Most Adoptable Rabbits

Our rescued rabbits come in just about every shape, size and temperament, and only a few of them are pictured here. We can tell you who's with us and more about their individual personalities when you call, but they all have one thing in common: the need for a loving, permanent indoor home. Please call (305) 666-BUNN or email dana@miami.edu for more information. You can visit our web site to view our most recent adoptable bunnies at www.bio.miami.edu/hare/adoptabun.html.

Tigger and Winnither Pooh are a bonded pair of very sweet, affectionate dutch/dwarf mix bunnies. Tigger (right), only about three pounds, is one of those super-smart bunnies who can figure out just about anything. He loves to be cuddled and petted. Pooh, a wee bit bigger than Tig, is also very cuddly and loving once Tigger tells her everything's okay.
Both have good litterbox habits, and are young and healthy. They'd love a home where they can run and dance with a loving human family!

Schultzie "The Package" was dropped on an unsuspecting doorstep along with two other bunnies, both of whom have been adopted. Schultzie is a mini-Rex, and is only about three pounds of super-velvet softness. He loves to be held and cuddled, and he's very gentle and sweet.
Everyone who meets this wonderful rabbit absolutely falls in love with him. Don't wait to meet Schultzie if you think he's the perfect bunny for you. He is a very special boy who needs a special home where he can be secure knowing he'll never be "dumped" again.

Winky is a big, lovable black Rex boy with a bit of lop heritage somewhere in the woodpile. That must be what gives him that half-droopy ear and maybe a bit of that Attitude!
Winky is about 7 pounds, so he needs room to stretch and dance.

Fuzzy (left) and Emma (right) need immediate placement due to their owner's family emergency. These are gentle, loving, bonded rabbits. If you can give them a home, please contact the Baez family at Ibaez@bellsouth.net or call them at (954) 956-9245 or (754) 368-4842.

Be sure to visit www.bio.miami.edu/hare/adoptabun.html to see more pictures of our other adoptable bunnies!
Runny Eyes and Nose (continued from page 2)

A rabbit’s molars are located almost directly under the eyes. Hence, molar root intrusion into the skull bones can cause occlusion (blockage) of the tear ducts, which run through the skull bones, close to the roof of the mouth, just above the tooth roots. A blocked tear duct will cause tearing and runny eyes, since the tears cannot flow through the ducts and into the back of the mouth, where the duct normally empties. A narrowed duct is more susceptible to becoming plugged with mucus or bacteria. If the duct is not completely occluded, it is often possible for your vet to flush the ducts and help restore normal flow. Whatever discharge comes out the nose from the flush can be collected and sent to a lab for culture and sensitivity testing.

Severe molar root intrusion can also be the cause of retrobulbar abscesses (i.e., abscesses located behind the eye, inside the skull). In some cases, the root has been known to puncture through the bone of the eye socket and into the eyeball itself, causing an intraocular (i.e., inside the eyeball) infection. Such severe problems may require the expertise of a licensed veterinary ophthalmologist, and your own vet may be able to refer you to one in your area, if necessary.

Even incisor (front tooth) roots can be pushed backwards into the skull and occlude the tear ducts. Again, this is usually visible only with radiography. Although your vet may suggest that incisor or molar removal may solve the teary eye problem, there are no guarantees. If the chronic trauma to the area already has caused enough scarring in the bone, even tooth removal may not open a blocked duct. You and your vet should confer to decide whether complete tooth removal to attempt to restore tear duct function is worth the risk.

Alleviating the Symptoms of Runny Eyes and Runny Nose

Runny eyes that cannot be permanently repaired via tear duct flush may cause skin burns and irritation where the caustic tears collect on the skin. It is usually helpful to apply warm washcloth compresses to the affected areas daily, to help soften the dried tears, and then gently rub them away. A fine-toothed, small flea comb may be useful in helping remove softened crusts from the fur.

One excellent way to help a bunny with chronic runny eyes is to allow him/her to choose a spayed/neutered mate from among those at your local rabbit rescuer’s foster home. Bonded bunnies spend a good deal of time grooming each other's faces, and we know of some bonded bunnies who once had very irritated skin from constant tearing who became completely symptom-free once they had mates to groom away those tears.

A very clogged nose is definitely a problem, as rabbits are obligate nasal breathers. You can help clear your bunny’s nose temporarily by gently suctioning with a pediatric ear syringe. Ask your vet about using a mild, pediatric antihistamine such as Benadryl to help shrink swollen nasal membranes. Together with a tear duct flush, which also helps flush the nasal passages, these treatments can be very effective at clearing the bunny’s breathing route.

Whatever the cause of your bunny's problem, the sooner you allow your vet to perform the right tests and prescribe the proper treatment, the better your bunny will feel.'
Thanks to our Wonderful Bunny Allies!

Our gratitude to Dr. Susan Kelleher, owner of Broward Avian and Exotic Animal Hospital knows no bounds. She and her staff have been our main fosterers, and they deserve special thanks for all they do to help the needy bunnies in southern Florida. To set up an appointment to visit Dr. Kelleher's fosters, please call her hospital at (954) 968-7171.

We're also grateful to Dr. Will Chavez, always ready with a helping hand. We truly are fortunate to have such wonderful professionals to treat our rescues! You can contact Dr. Chavez at (305) 670-0611.

The Wildlife Care Center in Fort Lauderdale has been an invaluable. They are housing nearly 100 rescued rabbits, and if you are thinking about adopting a rabbit or eight, now's the time. You can call the WCC to set up an adoption visit at (954) 524-4302.

A H.A.R.E. is Born!

It's official. With the official dissolution of Rabbit Rescue, Inc., the House Rabbit Society of Miami decided to incorporate independently as a tax-exempt organization. With the expert help of Jeffrey Weinstock, esq., we are now officially incorporated as H.A.R.E. (Houserabbit Adoption Rescue and Education), a not-for-profit corporation in the state of Florida. Our official 501(c)(3) status will soon follow.

The new board is headed by Dana Krempels, and the official directors are Susan Kelleher, Marielle-Gomez-Kaifer, and Kevin Johnson. We are interested in having a Major Bunny Get Together in 2005, so if you are interested in helping to organize this event, please contact Dana at dana@miami.edu or via our "hopline" at (305) 666-BUNN.

Update on the Miami International Airport Jackrabbits

In early 2003 the Miami International Airport authority spend a great deal of taxpayer money in an effort to eradicate a feral population of Black-tailed Jackrabbits (Lepus californicus) that had accidentally been established at the airport roughly thirty years ago. Local animal rights activist, Dr. Steve Rosen, spearheaded an effort to stop the MIA suits from slaughtering the hares, and giving rescuers and trappers enough time to capture and relocate them to a suitable habitat.

Thanks to Dr. Rosen's efforts, nearly 300 jackrabbits were captured by Todd Hardwick of Pesky Critters, Inc. and shipped to a wildlife sanctuary in Texas, where they now run free and safe in their ancestral habitat. A few of the captured hares were wee babies deemed too small to survive the trip to Texas, and these were bottle-raised by local rehabilitators, including the House Rabbit Society of Miami (as a satellite rehab unit for Rascals Wildlife Care Network, Inc.).

By the time the baby hares were grown, they were far too habituated to humans (and too spoiled) to be released into a desert habitat, so they are living out their days in local sanctuary where they play on an acre with rescued domestic rabbits. More about their story will be related in forthcoming issues of Warren Peace, and at a web site devoted specifically to these magnificent lagomorphs. Stay tuned!
We've Been Adopted!

We're happy to share the good news when our fosters find the home of their dreams. Here are just a few of the many bunnies who found loving, permanent families through the House Rabbit Society of Miami in 2003.

Marlee and Max found love and a wonderful new home together with Dorothy Verdon. They're now a bonded couple thanks to the efforts of Dr. Kelleher and her staff, who fostered them both while they awaited their new "mom".

We'll be honest. There were days when we thought big, sweet Sugar would never find a home. She fought with every other rabbit she met. But at last she has found the perfect family, and has begun adjusting to life with a dog, two cats, and even horses! Thanks to the Strelkow Family for giving Sugar the home we always knew she deserved.

Franklin arrived in a box on the doorstep with two other bunnies. All three had bites and nicks, and obviously weren't getting along well! A bit of rehab, a quick snip, and this handsome Holland Lop was adopted in a heartbeat. We know he'll have a great life with them.

Scarlet has gone home to live with Michelle McLellan to live a life of pampered splendor.

These are just a few of the dozens of wonderful rabbits that were adopted out to loving homes by the House Rabbit Society of Miami in 2004. Special thanks are due to Dr. Kelleher and her staff at Broward Avian and Exotic Animal Hospital for fostering and caring for so many, and for being the best showcase possible for our adoptable bunnies.
JOIN House Rabbit Rescue, Adoption & Education (H.A.R.E.)

Your contribution helps defray the costs of spay/neuter, medical care and maintenance of rescued rabbits. Make checks payable to The House Rabbit Society of Miami, and save your cancelled check as a record of your tax deductible donation. Mail completed form and check or money order (no cash, please) to: House Rabbit Society of Miami, c/o Dana Krempels University of Miami Biology Department Coral Gables, FL 33124.

For more information, please call (305) 666-BUNN or email dana@miami.edu

Name: ____________________________________________________________

Address: ________________________________________________________________________

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Your check is your receipt. All donations are tax-deductible.
WE STILL NEED BUNNY-LOVING VOLUNTEERS!

The House Rabbit Society of Miami is in desperate need of volunteers to help with our rescue efforts and organization. We're especially interested in folks who can help with:

- Fostering rescued rabbits
- Transportation of rescued rabbits
- Newsletter layout and typesetting
- Organization of meetings and special events

We need volunteers in Dade, Broward, and Palm Beach counties, as we're dealing with rescued rabbits and trying to reach Rabbit People in all three areas. If you would like to help, or would like more information about any of the above (or other areas in which you have expertise), please email dana@miami.edu or phone our HOPLINE at (305) 666-2866.

House Rabbit Society of Miami

Warren Peace is published by H.A.R.E. (Houserabbit Adoption Rescue and Education), an official Chapter of the National House Rabbit Society, an all-volunteer, non-profit organization dedicated to the rescue and welfare of domestic rabbits. Visit HRS online at www.rabbit.org

The H.A.R.E. Hotline is (305) 666-BUNN.
Visit our web site at www.bio.miami.edu/hare
Newsletter Editor: Dana Krempels
Board of Directors: Dana Krempels, Susan Kelleher, Kevin Johnson, Marielle Gomez-Kaifer

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