



With Fritz J. Trybus, D.V.M.

Head tilt, also called wry neck or torticollis is a common condition seen in domestic rabbits.

The severity of head tilt will vary from rabbit to rabbit. Clinical signs can range from a slight head tilt to some rabbits not being able stand without assistance. Severe cases may have a complete lack of balance. Most cases however will still continue to eat and drink so long as they have easy access to feed and water. Many diseases have been implicated in causing head tilt in rabbits. There is some controversy within the veterinary community as to what most commonly causes head tilt, and what the best ways to treat it are.

Common causes of Head Tilt include:

- Otitis interna (inner ear inflammation)
- Brain disease caused by Encephalitozoon cuniculi
- Other causes such as heat stroke, toxins, and trauma

OTITIS

Otitis simply means inflammation within the ear. The ear is divided into three areas – the external, middle, and inner ear. The most common cause of head tilt in rabbits is Otitis interna, or inner ear inflammation. Inner ear disease is not visible when visually inspecting the ear canal. It often requires radiographs (x-rays), CT scan or MRI to definitively diagnose. These advanced diagnostics are generally not practical for rabbit breeders to utilize. Often times we must treat empirically or try to rule out other causes of the head tilt.

Inner ear inflammation/infections are most commonly caused by bacterial infections, in most cases *Pasteurella multocida*. Other bacteria such as *Pseudomonas* sp., *Staphylococcus* sp., and *Streptococcus* sp. have been isolated in cases of rabbit otitis.

Inner ear infections should not be confused with Otitis externa, or external ear inflammation. Head tilt is NOT caused by external ear disease. External ear infections, often called "ear canker," may be caused by ear mites, bacterial or yeast organisms. Debris is easily seen on visual exam of the ears. While these infections may cause the rabbit to shake its head and act uncomfortable, it is not a cause for a true head tilt. Only inner ear disease will result in a head tilt.

At times an external or middle ear infection may worsen and extend downward into the inner ear causing infection. More commonly however, the bacteria extend into the inner ear from the respiratory tract. Thus, herds that have high incidents of head tilts, often also have high incidents of respiratory disease or "snuffles." Ventilation systems, isolation and treatment procedures for handling rabbits showing symptoms of snuffles must be closely reviewed if one finds these diseases occurring often within their rabbitry.

TREATMENT

Treatment for rabbits with suspect inner ear infections generally includes systemic antibiotics. The most common antibiotics used include: enrofloxacin (Baytril), metronidazole (Flagyl), oxytet-

racycline (Terramycin), chloramphenicol, injectable penicillin, or trimethoprim sulfa.

Rabbits may also be placed on a non-steroidal anti-inflammatory (most frequently meloxicam/Metacam). Steroids such as: dexamethasone, prednisone, triamcinolone should be avoided in rabbits. This includes topical, oral or injectable forms of steroids. Ear ointments and medications commercially made for dogs and cats often contain these steroids and they are not appropriate to use on rabbits.

A veterinarian should be consulted for appropriate doses and uses of any of these medications.

DISEASE OF THE BRAIN

The region within the brain stem known as the vestibular nuclei is what controls the body's central balance control. Problems within this area of the brain will result in a head tilt, loss of balance, circling to one side, and other clinical signs.

The protozoal disease *Encephalitozoon cuniculi* has been implicated in causing head tilt in rabbits by attacking the vestibular area of the brain. Most veterinarians believe that *E. cuniculi* does not play a role in peripheral vestibular disease (disease outside of the brain). *E. cuniculi* is relatively common within rabbit populations and does not always cause clinical disease. It is passed most frequently by the doe passing it to her unborn kits during pregnancy. Rabbits may also become infected with *E. cuniculi* by inhaling or ingesting the spores passed in the urine of other infected animals.

Testing for *E. cuniculi*

Serologic testing is available for *E. cuniculi*. The test however has limitations. Because so many rabbits are exposed to the organism, they may be positive on testing because of their exposure. A positive test does not equal a current infection or clinical disease. In other words, a rabbit with a head tilt may very well be positive for *E. cuniculi* but this may or may not be the actual cause for the condition. However if the rabbit is negative on testing, then *E. cuniculi* can be ruled out as a cause for the head tilt.

Treatment of *E. cuniculi*

Some rabbits may recover on their own from *E. cuniculi* without treatment. Medications may not completely rid the animal of the infection, but may slow down the progression of the disease. The most common treatment advocated is using the anti-parasitic medication fenbendazole (Panacur). Protocols exist for giving fenbendazole for 7 to 30 days. This medication is not completely benign. When the extended 30 day protocol is used, there is a risk of bone marrow toxicosis developing which may be fatal for the rabbit.

Other cause of Head Tilt

Parasitic disease - The most common parasite implicated is the raccoon roundworm, *Baylisascaris procyonis*. Rabbits become infected when ingesting the egg of the roundworm, within the raccoon feces. It then travels to the rabbit's brain causing the head tilt.

Trauma - dropping of the rabbit or any trauma to the neck or head may result in brain damage.

There is some controversy within the veterinary community as to what most commonly causes head tilt.

Heat stroke – exposure to high temperature may affect the rabbit's brain.

Toxins – Ingestion or inhalation of lead or zinc (in paints), certain plant toxins, insecticides or some anti-parasitic medications.

Neoplasia (cancer) – this is rare but can occur in the structures of the inner ear or surrounding areas.

General Treatment Guidelines

Supportive care is important when a rabbit is being treated for a head tilt. The animal must have easy access to feed and water and may need to be supplemented with subcutaneous (under the skin) fluids. Be sure the eye which is on the down side of the head tilt is protected. Administering eye lubricants is suggested. Keep the rabbit in an area that is quiet and away from loud noises and other stimuli. Bedding the cage heavily with hay is often helpful so they do not injure themselves if balance is lost.

As outlined, establishing a firm diagnosis as the cause of a rab-

bit's head tilt is very difficult. It may not be possible without advanced tests or a necropsy (post-mortem exam). Most treatment revolves around use of antibiotics, sometimes an anti-inflammatory (NSAID), possibly an anti-parasitic medication, and good supportive care.

Treatment may need to continue for 3-4 weeks before recovery is seen. Recovery, however, may be variable and some rabbits may have some degree of a residual head tilt. Others that recover from their head tilt may have it reoccur later in life. Please consult a veterinarian before attempting to medicate a rabbit that is experiencing a head tilt.

Dr. Fritz J. Trybus is a veterinarian and owner of the Cary Grove Animal Hospital, a small animal practice in the suburbs of Chicago, IL. He has been an ARBA member for 22 years and is also an ARBA Judge #775.



Lobbying versus Advocacy

Over the past few months there have been several discussions regarding the fact that ARBA "cannot lobby". While this is true, it's also the oversimplification of the situation. ARBA can lobby—within very strict limits.

Advocacy is the act of influencing some aspect of society—individuals, employers, government, other organizations. An example are the various PSA's the Ad Council runs on behalf of nonprofits. These advertisements seek to educate or provoke us, individuals. Lobbying is a very specific area of advocacy, that which deals with the government. There are two forms of lobbying: grassroots (ex. writing letters to a specific government official) and direct (ex. meeting directly with a government official). In both of these forms, the organization is utilizing whatever means necessary to influence the government official into agreeing with the organization's message—and this last point is extremely important. Just talking with a government official is not strictly lobbying, that is considered educating. Asking for a specific vote is lobbying. If we were to propose a law, that is lobbying. If we were to have every ARBA member write their congressman asking them to support a specific bill, that is lobbying.

How much lobbying a nonprofit can do is largely based on an expenditure test set by the IRS. The equation can be found on the IRS site, but in respect to ARBA, it currently amounts to just a few thousand dollars per year. In addition to that, we as an organization can not under any circumstances support or oppose a candidate for public office. This also prohibits endorsement or contributions by the organization, or any can-

didate's use of our resources. This latter point is where it gets very tricky, as we cannot even look like we're criticizing a specific candidate. If we are found to have violated any of these rules, then we would immediately and irrevocably lose our nonprofit status.

Truly successful lobbying in our government requires a great deal of money, deal making and candidate backing. So how can we do it as a nonprofit? How are others?

Currently, ARBA is focusing on two points: educating our government on the rabbit and cavy industries; and working with governmental departments to lead them to making the choices which are beneficial for our members. We've recently met with the United States Department of Agriculture to solidify an agreement that we would be a stakeholder with regards to any rabbit or cavy legislation. What this largely means is that when any legislation is being proposed, we will be consulted with regards to how this may affect our members. Being part of the discussion early on means that we will have more of a say than we currently do, and also means that we'll be prepared for any laws that may truly affect our community. We have also invited the USDA to our Convention in a non-regulation capacity. Dr. Rushin will be on hand to address our members and our Board about what and who the USDA is and where they believe we share interests.

We have also met with the Agriculture Committees of both the House and the Senate. In these instances the meetings were purely education for all of us. With discussions on who ARBA is, what we stand for and our own internal regulations. These meetings will continue to take place periodically.

These federal level meetings can easily be held in each of your states, counties and towns... and since we did not lobby per se, our budget is still \$0 and we need not worry about losing our 501 status.

