Moving Beyond Metacam. What’s New in House Rabbit Pain Management
By Susan Borders, DVM

Greetings, all! I recently attended the North American Veterinary Conference in Orlando, Florida and am thrilled to share some updated information regarding pain management in our house rabbits. Much of this information was gathered from attending lectures with specialists from around the world as well as talking to other experienced rabbit vets about their personal experiences with these treatments. Some of the information reinforces what we “thought” about previous treatments; however, there are some exciting new options on the horizon to help keep our rabbits comfortable while they recover from surgery or an injury, or battle an illness.

The topic of pain management in house rabbits is one that owners and veterinarians struggle with daily. As a species, rabbits are engineered to hide their illnesses and often don’t show clear outward signs of pain. Acute pain is typically expected secondary to an injury, surgical procedure or an episode of GI stasis. In these circumstances, owners often see their pet with a decreased appetite, grinding their teeth, or sitting hunched in their litter box. For rabbits dealing with chronic pain, such as chronic degenerative disease (aka arthritis), dental disease or bladder sludge, rabbits often appear to be just getting older. They may slowly lose weight. Often, they don’t groom themselves well so their fur starts to look dull and soiled. This can lead to hygiene issues such as urine scald, hock sores, etc. These secondary effects cause more pain for the animal. In a worst-case scenario, they may suffer silently, acting like everything’s fine. They may not show any outward signs of pain.

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New and Improved CHRS Foster Program
By Danielle Patterson

The New Year is starting with a bang, and we’re using it to re-energize our foster program! Over the years, we have continually lost foster parents for a variety of reasons, but the number of rabbits who need rescued has definitely NOT decreased.

CHRS provides vet care for each foster bun, as well as supplies such as exercise pens, water and pellet bowls, and litter boxes.

Foster 1 bun, and CHRS will provide the pellets. Foster 2 rabbits, and CHRS will provide pellets and hay. If you foster 3 or more rabbits, CHRS will provide pellets, hay and $20 monthly for toys from Bunny General.

Can’t commit to fostering full time or until the rabbit is adopted? We will work out a schedule that is convenient for you. No time allotment is too short! Emergency and temporary foster homes are always welcome. If you still have questions or concerns about fostering, contact me—Danielle Patterson—at 614-392-0154 or danielle@columbusrabbit.org. I will be happy to work out a schedule that meets your needs.

Can you think of a better way to begin 2012 than giving a homeless rabbit food, shelter and lots of TLC?? 🐰
Pain Management
(Continued from page 1)

until they have reached an extreme level and the underlying disease process is in an advanced stage. These are the cases that are hardest to treat, in my opinion. Therefore, regular check-ups with an experienced rabbit vet are essential, especially as the rabbit gets older. I typically recommend yearly check-ups for rabbits until they reach five years of age, for dwarf breeds, or six for the larger breeds, and then twice a year, as these exams are very beneficial at picking up on aging changes and the resulting diseases that commonly occur.

The most common pain medications used in rabbits for acute or chronic pain are the class of drugs known as the NSAIDS, which stands for Non Steroidal Anti-Inflammatory Drugs. Commonly, NSAIDS used in rabbits include meloxicam (Metacam) or carprofen (Rimadyl or Novox). Metacam comes as a vanilla flavored liquid normally, and most rabbits like the taste; therefore, it’s by far the most popular NSAID prescribed by rabbit vets. Rimadyl is dispensed in tablet form and must be hidden in a treat for administration, although many of my clients find hiding it in a slice of banana works well. I have found both to be equally effective, but there are individual patients who seem to respond better to one than the other, especially as they get older. In the past, Banamine was an NSAID used to treat pain, especially from GI stasis. It works well in horses, whose digestive systems are similar to rabbits, but the negative side effects far outweigh the benefits of this medication. Therefore, Banamine is not recommended in rabbits.

NSAIDS reduce inflammation and pain by inhibiting certain enzymes that produce prostaglandins. Prostaglandins are created during an injury, surgery, or other disease process, and are the chemicals that cause pain. Not all NSAIDS work exactly the same way, and the newer ones like Metacam and Rimadyl are typically well tolerated when used under the close supervision of a veterinarian. Side effects of drugs in the NSAID group can occur at the level of the stomach lining, kidneys, and liver. Blood work should be performed before using these medications for more than a few days and every six months with chronic use.

As a veterinarian who uses both Metacam and Rimadyl regularly for short and long term pain relief in rabbits, I would caution owners to be very careful before administering these to their pet without first consulting with their vet. Most medications used in rabbits, including NSAIDS, are referred to as “extra label use” by the FDA. Therefore, there is no guarantee of safety or efficacy like in other species. Over the years, veterinarians have successfully helped many rabbits with them, and I believe they are often essential to quality of life for many patients. There are a lot of varying opinions about dose, frequency of administration (once a day vs. twice a day), and chronic use protocols. More evidence is supporting that the effective dose of Metacam for rabbits is slightly higher than in other species and it may be cleared from the body more rapidly in rabbits, making the dosing interval between treatments questionable. I feel that a pain management plan must be customized to each individual patient, and what’s right for one rabbit may not be right for another. Good, open communication with an experienced rabbit veterinarian is essential.

Another pain medication becoming more commonplace in rabbits is Buprenorphine (Buprenex). This medication is from a class of drugs called Opioids. Buprenorphine is particularly effective for soft tissue pain, such as pain caused by GI stasis, wounds, etc. It comes in small injectable vials and, although the same product can be given by mouth in cats and is absorbed through the mucosa on the inside of the cheek, no one knows for sure if this is an effective route in rabbits. I always recommend it be given by injection for the best pain control in rabbits. The dose used is a very small volume and since it doesn’t sting when injected under the skin, most owners find it easy to administer. Occasionally, this drug can cause drowsiness. Some worry that this drug can cause constipation, but most specialists agree that this is not a common side effect and recommend its use regularly for many causes of pain, including GI stasis, where patients are already experiencing decreased bowel movements. It has quickly become one of my favorite drugs because it can be used in addition to the NSAIDS, like Metacam, if needed, and is very safe. One word of caution when using this drug is that the doses are very small; therefore, it’s important to make sure that you read your syringes correctly and make sure you are comfortable doing so at home.

One drug that is losing popularity in rabbits is Tramadol, which is an “opioid-like” drug and has gained tons of popularity in other species such as dogs and cats over the past few years. The latest thinking on this drug in rabbits is that it’s not effective at providing pain relief until extremely high doses are administered (10 times the dog/cat doses), and the duration of the drug’s effect may be less than one hour based on one recent study. This is a very

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Warm Hearts and Bunny Kisses—Adoptable Bunnies!

Brrrr! It may be cold outside, but we guarantee our foster buns will melt your heart and warm your toes with their special brand of bunny love! Check out all our current foster rabbits at www.columbusrabbit.org.

Mira and Fivel

These siblings, born around July 4th, 2009, were found as strays when they were just babies. They are not currently living together and can be adopted separately.

Mira has only one ear, but our vet believes she was "born that way." She weighs about three pounds and is very outgoing and active. She loves to zip around the house and is an excellent athlete. Despite her small size, she has no problem jumping on furniture to check out life from above. She enjoys doing bunny 500's and will easily hop across slippery surfaces without hesitation. Despite her winning personality and perfect litter box habits, Mira was adopted and returned. She is looking for a forever home that really lasts forever. Will it be yours?

Fivel was the runt of the litter and is named after the mouse in the movie "American Tail." Today, Fivel is a strapping bun weighing in at 3.5 pounds. He is very active and does some of the fastest bunny 500's you will ever see. He loves his chew toys, cottontail cottage and hay. Fivel can be picky about his greens, but he has yet to meet a snack he doesn’t like. Because he can be very vocal at times, easily frightened and difficult to handle, we believe Fivel would do best in an adult only home. So, if you are up for an adventure...Fivel is your man!

Snowflake is a Polish rabbit saved by a dog rescue in Mt. Gilead. Less than a year old, this little guy sure is charming! He loves to chew on apple twigs and has developed quite an appetite for greens and treats. He has perfect litter box habits and is learning to eat hay. Fast and furious, he enjoys running at top speeds. Despite his small size, he’s quite the little daredevil! Won’t you bring this snowflake into your home this winter?

We need foster homes!

Want to make a difference in the life of a bunny?

We need volunteers to care for abandoned and unwanted bunnies while they await placement in permanent, loving homes.

All you need is a little extra room in your house and your heart. CHRS can help with the rest—vet care, housing, supplies, litter boxes, food, toys (fosterers pay for hay and greens).

Want to try it first before committing? Want to help but can’t commit full time? Even signing up to be an emergency or temporary foster home is a big help. Temporary shelter can mean the difference between life and death for a rabbit in critical need.

Contact Danielle Patterson at danielle@columbusrabbit.org or 614-392-0154.

Mira

Fivel

Nibbles

At less than a year old, Nibbles is a lion head/lop mix with one ear up and one ear down! When Nibbles was rescued, his incisors were sticking out of his mouth and he was skinny. His malocclusion could not be corrected, but he was otherwise healthy, making him a good candidate for incisor extraction surgery. Although he won’t be chewing on electrical cords or baseboards, he does need to have his veggies cut in tiny pieces so he can chew them with his molars. Nibbles is being fostered in a home with a dog and a cat, so he’s used to other animals. He is extroverted and very curious. Nibbles loves his hay and has great litter box habits. If you are searching for some-bun with loads of energy who will make you laugh, this is the one for you!

Snowflake is a Polish rabbit saved by a dog rescue in Mt. Gilead. Less than a year old, this little guy sure is charming! He loves to chew on apple twigs and has developed quite an appetite for greens and treats. He has perfect litter box habits and is learning to eat hay. Fast and furious, he enjoys running at top speeds. Despite his small size, he’s quite the little daredevil! Won’t you bring this snowflake into your home this winter?
A Black (and White) Tie Affair: More Adoptables!

Looking to step out in style? Need a little black number, or do you prefer a handsome tuxedo? Maybe something more daring, like spots, perhaps? Make your fashion statement with our black and white bunnies! Visit www.columbusrabbit.org for all their style tips.

**Harley**

About a year old, Harley is a handsome boy, rescued with 3 other rabbits from life as a stray. Harley is one of the friendliest buns in town! He will race to the front of his pen to greet you and is always ready and willing to hunker down for pets. Harley is also known for doing some of the best bunny binkies and silly head shakes, and even a perfect bunny flop or two. He also loves to eat—veggies, pellets and hay—and likes to munch on willow baskets in his spare time. He has super litter box habits and loves to explore! Poor Harley was adopted once, but came back when his new owner had to step in to care for a sick relative. He'd love to stop moving around and really settle into a new forever home. His bags are packed, he just needs you!

**Oreo**

Oreo was born around June of 2010 and started life as a 4-H rabbit. In spite of his early strife, he is one of those "unusual" rabbits who likes to be picked up and held, and will tooth purr for as long as he’s being scratched behind the ears. He binkies when anyone enters the room and speaks to him. Oreo is very good with kids and cats. His little black tail shakes with glee when he sees a person or cat enter his room. He even loves when the cats groom his head! Oreo loves his veggies, pellets and hay and has good litter box habits. He gets a small slice of banana each morning and he shakes his whole body in appreciation. Are you ready to add this 3 pound bundle of love to your family?

**Darby**

Meet Darby! In spite of a rough start in life—living in a basement in a tiny, filthy cage with nothing but pellets and water and no company—this little guy's personality can't be contained! He loves being with people, his best friend is a big black lab named Scout, and his nemesis is Maggie-Cat with whom he has stare-downs (and wins)! Now that he lives the posh life, he keeps himself clean and tidy, with perfect litter habits and grooming. He's also very happy to share his story in his own words on our website! *Note: Darby is a “special needs” rabbit—because of his early years of neglect, he will need periodic teeth trims to keep his molars healthy (every 6 months). But Darby is an extraordinary rabbit, and if you'll commit to caring for his medical needs, he will more than repay you in binkies and tooth purrs.

**Thule**

Thule is a 3 year old black and white Dutch bunny who enjoys people and other bunnies and is ok with cats and dogs. She is calm, sweet natured, and loves to be petted. She can’t wait for her banana in the morning, but is more laid back at dinner, sometimes waiting until late evening to eat her salad and pellets- but they are gone every morning! Thule has been wonderful living with lots of other animals, but would love a home where she could be the recipient of all the love and attention. She is a sweet little girl looking for her forever home.

**Emmy**

Emmy got her name from the dramatic markings in her fur! She LOVES to show off by racing through her maze and tunnels and finishing with a gravity-defying hop into the air. With perfect litter habits, she is a joy to have around!

**Hannah**

Hannah is a sleek rabbit with an opinion on everything! She's very loving, adores cuddling, but it's on her own terms. Hannah is high-energy, and is very vocal with tooth purrs of contentment and grunts of excitement about her food.
What’s New at Capital Area Humane Society (CAHS)
By Amy Shears

The Capital Area Humane Society has a new volunteer program called Skills, Training, Engagement and Practice for Success (STEPS). In STEPS, volunteers will spend 25 hours learning about the mission of the Capital Area Humane Society as well as the fundamentals behind caring for the animals. Part of the 25 hours is 5 hours of mentored volunteering in the area of your choice. At the conclusion of the program, participants will receive a certificate of completion as well as credit for 25 volunteer hours, which will fulfill the community service requirements for many local school systems. Volunteers wishing to continue to serve will be eligible to volunteer in entry level positions.

Volunteering at the Capital Area Humane Society is a very rewarding experience. We get rabbits from all different types of situations: surrendered by owners, brought in by good Samaritans who found them running around outside, confiscated by humane agents, transferred from other rescues and shelters, etc. Some of them come in very social and do well at the shelter immediately. Others come from bad conditions and are very scared and not used to humans. Rabbit volunteers work with those rabbits to help socialize them. It is very important for them to be accustomed to being around humans for their adoption to be successful. We give them love and attention until they find their forever home.

It is amazing to see a rabbit transform from being frightened to blossoming into a rabbit who seeks out human interaction. Then you see them go to their forever homes knowing that you had a part in making them the loving rabbits they are when they leave the shelter.

If you are interested in becoming a rabbit volunteer at Capital Area Humane Society, please go to www.cahs-pets.org/get_involved/volunteer.htm, and it will tell you how to sign up for the STEPS program.

Amy Shears is an active member of the Columbus House Rabbit Society. She serves as a liaison between CHRS and CAHS.

Educational Events and Milestones
By Julie Schram and Terri Davenport Cook

Once again, CHRS Educators were busy in 2011 with various events and presentations. Read on for some of the highlights. Check out our blog for more about these and other activities!

Ten Years of the Midwest Vet Conference
Last year marked the tenth year CHRS had a booth at the annual Midwest Veterinary Conference, something we’ve done since before we were even an official chapter of HRS. We are proud of this; our presence has helped to establish a firm relationship with our local veterinary professionals. Now, as we review our hand-outs and materials in preparation for the upcoming Conference, striving to provide new quality information to the community we serve, we look forward to the next ten years.

Adopt a Valentine
A huge “thank you” to volunteers Cindy D., Debbie W., and Rose C., who helped veteran Educators Julie, Laine, and Terri at the annual Adopt a Valentine event in Clintonville. Cindy donated her delicious cookies to the bake sale to ensure our free booth space. Our spokesbuns were none other than the litter of babies from last winter. They put on quite a show for everyone with their antics!

Wessie Fest 2011
by Julie Schram
As CHRS has done for the last few years in late August, we participated in Wessie Fest (an outdoor event focused on educating the public about nature and promoting conservation). It was a warm day filled with lots of sunshine and the sounds of live music, including a Celtic band. There were also various hands-on activities for both the young and the young-at-heart. And for those looking to conserve energy, the exhibitors at one booth were

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Pain Management
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safe drug and may still be used in a pain management plan, but more and more research fails to support its efficacy for rabbits.

A relatively new drug for neurologic pain, e.g. back pain due to disc disease, pinched nerves, etc., is Gabapentin (Neurontin). This medication appears to have a promising future in rabbits and could also be combined with other pain medications if needed for additional relief.

Veterinarians and rabbit owners alike are always looking for safe ways to support our pain management plans in order to use the least amount of injectable or oral medications possible. Concerns vary from owner convenience, stress to the pet with repeated dosing, and the risk of side effects from these standard approaches to pain. Luckily, there are a number of alternative treatments showing a lot of promise with rabbits. Acupuncture, performed by a certified veterinary acupuncturist, uses small needles to stimulate nerve pathways or meridians within the body and has been helpful in treating GI stasis, arthritis, and neurologic disease in rabbits, to name a few disease processes. Most rabbits tolerate this treatment very well, and may even fall asleep during the procedure, due to the endorphin release created by the needles.

Low level laser therapy is another alternative treatment aimed at providing pain relief, decreasing inflammation, and accelerating the healing process. Both of these alternative treatment options are becoming increasingly available and are minimally invasive to the pet. Repeated visits are often necessary with both, but chronic therapy plans can usually be tapered down as the pet improves.

Other alternative therapies include nutraceutical products like glucosamine and chondroitin sulfate, which are included in most oral joint supplements. These ingredients are all natural and are intended to make our pets’ joint fluid more slippery, plus help repair damaged cartilage within inflamed joints. Supplements in this category are to be used with minor caution because the quality and source of the ingredients can vary from brand to brand, and this can lead to variable absorption from the GI tract and efficacy. Therefore, beware when purchasing these from pet stores or pet care catalogs. I recommend working with your veterinarian to find a suitable choice for your pet.

Adequan, an all natural injectable glucosamine product, is also growing in popularity in rabbits with chronic arthritis. The goal of using this injection instead of, or in addition to, an oral glucosamine vitamin is that it may provide indirect anti-inflammatory benefits without interfering with other more traditional pain medications like the NSAIDS. Therefore, it can be used in addition to them, providing a multi-factorial plan for pain management. I feel that this is important for rabbits battling chronic pain from arthritis and have found it to be quite effective, safe and inexpensive. I do not believe it’s helpful for rabbits experiencing back problems due to inflamed discs, pinched nerves, etc., so this is where trying to achieve a definitive diagnosis as to your pet’s cause of pain with an experienced rabbit veterinarian is important.

The alternative therapies I have discussed here often don’t replace the need for standard pain medications, but they could decrease the amount or frequency necessary for long term comfort.

As you can see, there are an increasing number of safe and effective medications and alternative therapies available for our house rabbits. Regular comprehensive physical exams and open communication with an experienced rabbit veterinarian are essential to maintaining the health and overall well being for these special pets.

Dr. Susan Borders is in private practice at Norton Road Animal Hospital in Columbus, OH. Call 614.870.7008 for an appointment.

Running the Numbers: Where the Money Goes


When you give your money to CHRS, you know it’s going toward helping needy rabbits.

But what does that mean? How do we use your money?

Well, in 2011, we spent over $6,000 on veterinary services, for surgeries and medications, from spays and neuters to treating illnesses and injuries.

We also assisted the Buckeye Chapter with a large-scale rescue case, donating $1,500 to them to help cover unexpected veterinary costs.

Thank you for making these things possible!
Acupuncture therapy is a technique of Traditional Chinese Veterinary Medicine (TCVM) and has been used to treat animals in China for thousands of years. This system began in prehistoric times as the ancient people attempted, through trial and error, to understand domestic animal disease. Through the present day, each generation has added their knowledge to the discoveries of their ancestors. The integration of this information, allows TCVM to change and grow, and remain as fresh, adaptable and effective as ever.

Learning about TCVM and acupuncture requires you to shift your perspective. In general, conventional Western medicine believes in control and is more mechanistic. Western practitioners analyze a disease process to discover its specific, fundamental physical cause. TCVM believes in balance and energy. TCVM practitioners recognize disease as an imbalance in the body. They understand that the body is an integrated, energetic structure, and that disturbance of energy flow creates disease in the whole body. Diagnostic tests of TCVM include pulse palpation, tongue evaluation, specific acupuncture point palpation, and the animal’s general medical history.

Generally speaking, the goals of TCVM and Western medicine are the same: both hope to promote health and prevent disease. They are merely two different ways of viewing the world, each with strengths and weaknesses. Through the integration of the two systems, one may be able to take advantage of the strengths of each while minimizing the weaknesses.

Some Commonly Asked Questions About Acupuncture:

1. How does acupuncture work?
   *If you think with your left brain (logic), read this explanation. When I insert a needle into an acupuncture point, it stimulates a nerve to send a response to the spinal cord. This impulse travels from the spinal cord to an area in the brain called the hypothalamus. The hypothalamus stores many chemicals (polypeptides) that have various actions on the body. There have been at least 66 of these chemicals identified. Some of the common ones are endorphins and enkephalins, which are known to relieve pain. These are our body’s natural opiates. Other chemicals will work on various muscles and cells in our body to release our own cortisones, antihistamines, muscle relaxants, and so on.

   *If you think with your right brain (creative), read this explanation. We have an energy known as Qi (pronounced chee), which circulates completely throughout our entire body every 24 hours. Various forms of this Qi, such as Yin and Yang, flow along pathways called meridians and provide each organ system with energy and nourishment. If this energy is in balance and flows smoothly throughout the entire body, then there is harmony and health. If this energy is disrupted in its flow or has become contaminated, then there may be visible clinical pathology in the physical body. This can also affect mental aspects of the animal. When I insert a needle into an acupuncture point, I am freeing and directing Qi throughout the body.

2. Is it painful? How will my animal react?
   Acupuncture is performed with sterilized, thin stainless steel needles. There is occasionally a brief moment of sensitivity as the needle penetrates the skin in certain sensitive areas. Once the needles are in place, most animals relax, often falling asleep during treatment.

3. Is it safe?
   Acupuncture is one of the safest therapies utilized if practiced by a competent acupuncturist. Side effects are rare. Occasionally an animal’s condition may deteriorate temporarily before improving. Because acupuncture balances the body’s own system of healing and no chemicals are administered, complications rarely develop.

4. How often and for how long does one treat?
   Treatments may last from 10 seconds to 20 minutes depending upon the condition treated and the method employed. There are many ways to stimulate acupuncture points including needles,
Education Events  
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handing out energy saving light bulbs.

Although it did not appear to veterans of the event, Megan Metzger and myself, that as many people attended this year’s festivities compared to previous years, our spokesbuns Popcorn and Amber (both of whom are lion head mixes) still attracted a great deal of attention. After all, people couldn’t help noticing the long tufts of fur on Popcorn’s head between his ears as well as on the sides of his cheeks! We also received a challenge from The Turtle Lady who (tongue-in-cheek) wanted to put up one of her turtles against one of our buns in a race, à la “The Tortoise and the Hare.” Even if there had been a safe, secure way for us to accomplish this, Popcorn and Amber certainly would have run “The Bunny 500” around that silly turtle!

Perhaps the most memorable part of the day was the comment made by an observant father with whom Megan and I spoke that afternoon. The man’s curious child was trying to get the buns’ attention while they were otherwise occupied in the litterbox. Without missing a beat, the father told the child to leave the buns alone. More specifically he said, “You wouldn’t want someone to bother you while you’re going to the bathroom, would you?”

Who can argue with that?

Pet Promise Rescue Run
Once again, CHRS volunteers were on hand for the Pet Promise 5k Rescue Run/Walk. This year, Team Rabbit was represented in the race by Shannon McLaughlin Morrison. Spokesbuns Popcorn and Amber also developed their own fan club—including a very curious and friendly Golden Retriever!

Mystery Lane Farms Community Day
by Julie Schram
CHRS was invited to attend an event that was sponsored by Mystery Lane Farms and held at Magic Meadows Stables in Heath. Although it was early October, the weather was cool and damp. Fortunately, Megan Metzger, spokesbuns Popcorn and Amber, and I, as well as the other participants, were sheltered from the elements, as we were inside the barn. There were also riding and training demonstrations held outside the barn.

One of the other groups attending was a mounted search and rescue unit. And a local veterinarian demonstrated acupuncture on a horse. Of course, for the serious equestrian, riding apparel was for sale. Popcorn and Amber had a bit of competition for attention from the petting zoo which was made up of a miniature horse, a couple of goats, and a few chickens, but they took it in stride. They were content just to chill out for the afternoon. No mystery there!

2011 Midwest BunFest
To wrap up the year, CHRS attended the first annual Midwest BunFest, organized by our friends at Ohio House Rabbit Rescue (OHRR). OMB (Oh, my Bun) what a FUN event! Hundreds of bunny-lovers were there, and some even brought their beloved buns, including our own Megan Metzger with her gregarious Floyd! OHRR arranged a full day of educational sessions on topics ranging from bunny basics (presented by CHRS Educator Megan Lynch) to tips on home support for elder buns (given by Terri Cook). Local vets spoke on geriatric care, alternative treatments, and common health concerns. Artists and vendors sold a variety of rabbit-related items, local vet techs offered bunny “spa” services, and a pet photographer snapped portraits in a variety of holiday-themed settings. It was fun to meet so many rabbit lovers from all over the Midwest. Many of the attendees had “met” online prior to BunFest (via Bunspace, Facebook, mailing lists, etc.), but nothing can replace putting a name with a real face—even when that face has whiskers and a wriggly nose! 🐰
Dear Labby
This article originally ran in the April 2011 edition of Tech Talk. It is reprinted with AALAS’ permission.

Why is normal rabbit stool so perfectly round? I know other animals have roundish, formed droppings, too, such as sheep, horses, and most rodents. What forms their feces anyway?

Pondering in Poughkeepsie

There comes a time in everyone’s life when they must solicit a higher power to answer their questions. This is one such moment for me. To answer your question, I had to query an all-knowing coworker who is an expert in animal poop. Thanks for your help – you know who you are!

According to my friend, the answer is easy. The reason rabbit feces are round is the presence of anatomical structures called haustra. To explain what haustra are and how they work requires a journey through the colon; it’s a fairly complicated process, but I will attempt a quick tour so that you get the basic idea.

In Latin, haustra means “a machine for taking up water” or, more literally, “bucket” or “scoop.” It makes sense when you think about it, right? Haustra is plural; the singular is haustrum. (Just for fun, the word poop came about from the Middle English word poupen or popen, which meant “to pass gas.” As American slang, poop came into use with its current meaning around 1900.)

Haustra are found in the large intestine of many mammalian herbivores and omnivores, including humans. They are the pouches that form in the walls of the colon as a result of longitudinal “straps” that are shorter than the muscle fibers in between them. Picture a cloth sack, like a laundry bag, with a drawstring closure at the top. When you draw the string, the cloth gathers and forms pouches. It’s not a precise comparison, but this mental image might help you to understand the concept.

Carnivores and ruminants lack haustra in their large intestines; their excrement is formed (or not!) in a different manner. Omnivores, such as pigs and humans, have complex large intestines that do include haustra, but in general are more simple than non-ruminant herbivores. Thus, these “bands” do not play a large role in stool formation in omnivores.

Non-ruminant herbivores, such as rabbits and horses, have larger or more specialized colons to better utilize their high-fiber diet; haustra play a part in their stool formation.

As you probably already know, the large intestine is the part of the digestive system responsible for the resorption of fluid and electrolytes, and in some omnivores and herbivores it is responsible for the fermentation process of fiber. All of these functions take a long time; the design of the large intestine makes it possible to slow the digestion process down and allow for all of these things to happen. The partially digested food is rolled from pouch to pouch (or haustrum to haustrum, if you will) which act like buckets that hold the material and slow its movement through the colon. When one pouch distends and fills with material, the muscle fibers that create the pouch contract and “roll” it along from one pouch to another, with the mixing, drying, and formation occurring as the material moves on down the line. In the end, the mostly dried, indigestible material ends up as the perfect little “rabbit raisins” we all know and scoop.

I’ve given you a simplified version of the general stool formation process in bunnies. If you wish to learn more, I suggest you consult your favorite anatomy and physiology textbook for the rest of the story.

Acupuncture
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electroacupuncture, aquapuncture (injecting solution into the point), moxibustion (heating the point) as well as laser acupuncture. Initially, patients are seen 1 to 2 times a week for 3 to 4 weeks. A positive response is often noted within the first 2 to 4 treatments, sometimes earlier depending upon the condition treated. After that point in time, treatment interval is slowly spread out so that most patients require a visit every 6 to 12 weeks.

5. What conditions are most commonly treated in rabbits?
The conditions that I most commonly see rabbits for are: extra comfort and mobility with osteoarthritis, help in resolving head tilts, appetite stimulation, GI tract stimulation for ileus, supportive treatment for cancer and other conditions that require analgesia (pain control). 🐰

References

Dr. Jane Flores is in private practice at Elemental Veterinary Center & Pet Spa in Columbus, OH. Call 614.824.4036 for an appointment.
Make Mine Chocolate! Day at CAHS
Information Day, Bake Sale, and Raffle!

First Event a Big Success!
Last April, the first annual CHRS "Make Mine Chocolate!" Day was held at the Capital Area Humane Society (CAHS) in Hilliard, Ohio. And what a GREAT event!!

The timing was perfect, with a class of new shelter volunteers and a group of about 60 Girl Scouts all going through the shelter on the same day. It added up to a lot of foot traffic coming past our tables! Our volunteers got a chance to talk about the challenges of living with a house rabbit and explain the goals of "Make Mine Chocolate!"

We had many winners in our great raffle, and gave away lots of info on living with a rabbit. Thanks to our friends from Job's Daughters, who provided a ton of sweet baked goodies, the bake sale was a huge success! Our event raised nearly $700 for the bunnies at CAHS!!! But the best part was appearing on the 10TV News the following morning!

We'd like to say THANK YOU to all the volunteers who worked so hard make it a great day, and to CAHS for allowing us to set up in their lobby!!

MMC Day—March 10, 2012
We’ll do it all again this year on March 10th. We’re lining up more terrific raffle prizes, more baked goods, more CAHS bunnies, and more fun! We’d love to have some extra help, so sign up to volunteer! Visit our website for all the details.

Store Reward and Gift Cards
CHRS Benefits when You Shop!

**Kroger Gift Cards**

Log in to your Kroger Rewards Account or create a new one.

Click on Edit Kroger Community Rewards information and input your Kroger Plus card number.

Our Non-Profit Organization (NPO) number is 81463. Register with our NPO number or name of organization, select organization from list and click on confirm.

If you have questions, visit the Customer Service Desk at your local Kroger store.

Then, remember to swipe your card when you shop!

**Giant Eagle Gift Cards**
When you buy Giant Eagle gift cards from Columbus HRS, we get 5% of the value. Use them same as cash.

Just by doing your grocery shopping, you are helping us help more needy rabbits.

We are selling them at face value in denominations of $50, & $100.

**Meijer Rewards**
Rewards will be earned by using a Meijer Credit Card, Debit Card or cash at any Meijer store.

CHRS will receive 1% of all eligible purchases made with a Meijer credit card at a Meijer store and 0.5% of all purchases made with cash.

Visit www.meijer.com/rewards to register.

Our organization code is 399973.

It only takes a minute to sign up!
Join the Columbus House Rabbit Society

Are you interested in helping rabbits? If so, please consider joining us. What do you get for your membership? A lot! Just take a look:

- Newsletters
- Updates on Columbus HRS news & activities
- Advice on rabbit care and behavior
- Social activities and annual events

The opportunity to get involved and help needy rabbits • Lots of new friends

It’s easy to join. Just fill out the membership form and send it along with your check to:
Columbus House Rabbit Society
P.O. Box 29444
Columbus, OH 43229

Thank you and welcome!

National—Includes the House Rabbit Journal: USA: $18 _____

Columbus Chapter—Includes bi-annual Newsletter: COLUMBUS CHAPTER: $12 _____ JOIN BOTH: $28 _____

Indicate Newsletter preference: PDF by email _____ Hard copy by US mail _____

NAME
STREET NO.
CITY
STATE ZIP
HOME PHONE: CELL PHONE:
EMAIL

Contact preference - please check one: ( ) Home phone ( ) Cell phone ( ) Email

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Wish List

- Extra Large Litterboxes
- Litter:
  - Yesterday’s News
  - Carefresh
  - Wood Stove Pellets Please
- Rabbit Pellets: Oxbow Pellets Please
- Exercise Pens
- Office Supplies:
  - Copier paper
  - Postage stamps
  - Envelopes

Sponsor Corner

The Columbus House Rabbit Society wishes to acknowledge the ongoing support of the following businesses:

- Capitol Citicom Inc.
  2225 Citygate Drive
  Columbus, Ohio 43219
  614/472-2679

- Dr. Ann Crafton
  8462 Nuthatch Way
  Columbus, OH 43235
  614/371-2273

- Dr. Diana Dornbusch Cron
  Glenway Animal Hospital
  6272 Glenway Avenue
  Cincinnati, OH 45211
  513/662-0224

- Norton Road Veterinary Clinic
  Dr. Borders, Dr. Logan
  1111 Norton Road
  Galloway, OH 43119
  614/870-7008

- Dr. Diana Dornbusch Cron
  Capital Veterinary Referral & Emergency Center
  Avian and Exotic Service
  5230 Renner Road
  Columbus, OH 43228
  614/870-0480

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Goodsearch and Goodshop

Visit
www.goodsearch.com
to search the internet

www.goodshop.com
to shop your favorite sites

Enter our name in the space given for Charity Name

CHRS receives cash for every search or purchase you make!

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Columbus House Rabbit Society

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Educator / Fosterer / In Training:
Kim Banks - E/FIT
John Dean - E
Laine Kathary - E
Megan Lynch - E
Megan Metzger - E
Danielle Patterson - E/F
Julie Schram - E
Karen Winstead - E/F

Corrections, comments or contributions can be sent to terr@columbusrabbit.org

Our mailing list is private. We do not share it with any other organization.
Bunny General for All Your Rabbit Needs!

Shop Columbus HRS’ Bunny General for rabbit care items and accessories. Proceeds go toward the care and housing of our foster rabbits.

- Oxbow products:
  - Hays: Timothy/Alfalfa/Orchard Grass
  - Bungalows
  - Timothy/Alfalfa pellets
  - And more!

- American Pet Diner Hays

- Exercise pens
  (2, 2-1/2, 3, and 4 ft.)

- Busy Bunny products

- Carefresh & Eco Straw
  Litters/Litterboxes/ Grooming
  Supplies/Water & Food Crocks

- Cottontail Cottages, Hideaways & Tunnels

- Emergency Decals

- And much more!

To make an appointment to shop at Bunny General, please contact Karalee Curry:
phone: 614.470.0093
email: karalee@columbusrabbit.org

Great Ways to Support CHRS!

- Register your Meijer and Kroger cards with our Organization Code (see page 10 for details)
- Save your spare change in a Bunny Money Jar
- Shop at Bunny General
- Sponsor a foster bun through our online Bun-to-Bun Sponsor program
- Sign up for Buck-a-Bun donation program
- Use www.goodsearch.com and www.goodshop.com
- Volunteer your time!