

Bloat, or Acute Gastrointestinal Dilation in Rabbits

By Dr. Barbara Oglesbee, DVM

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Gastrointestinal Dilation, also known as gastrointestinal obstruction or "bloat," is one of the few immediately lifethreatening conditions seen in house rabbits. Therefore, it is important that rabbit owners be aware of the signs and symptoms of this disorder. The earlier medical treatment is started, the greater the probability the rabbit will survive.

Gastrointestinal (GI) Dilation is not related in any way to gastrointestinal stasis (GI stasis), or hypomotility syndrome, although it can sometimes be difficult to tell the two apart. GI Dilation is caused by a sudden and complete obstruction (or blockage) of the intestines. Most of the time the blockage occurs in the small intestine, just 2-3 inches past the stomach. Less often, it occurs where the small intestine meets the cecum (called the ileoceco-colonic junction). If the intestine is blocked very close to the stomach, symptoms develop very quickly. If the blockage is further down, by the cecum, it may take longer for the blockage to become life threatening.

So, what happens when the intestines are completely blocked? As you are probably



aware, rabbits cannot vomit. They have a very tight sphincter at the entrance to the stomach to stop anything from moving from the stomach up into the esophagus and out the mouth. Rabbits also make a lot of saliva to moisten and help digest food. The stomach also makes a lot of fluid for the same purpose. If the intestines suddenly become completely blocked, the rabbit

> This x-ray of a rabbit with GI Dilation (Bloat) shows the very large, dilated stomach.





Harelines, the Buckeye House Rabbit Society Newsletter, is published by the all-volunteer, non-profit Buckeye House Rabbit Society, Athens, OH.

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Visit the House Rabbit Society at http://www.rabbit.org and the Buckeye House Rabbit Society at http://www.ohare.org

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We know our members value their privacy and that's why we never, ever, sell our mailing list or distribute it to any other party. All of our members' information is held in the strictest confidence.

Special Thanks to:

Doris Wishner, for her generous contribution in memory of her dear Brioche.

Gary and Sue Embree, for donating a huge box of grass balls and chew rings to our foster bunnies.

Peggy Jensen, for her thoughtful gift in memory of Doris Wishner's Brioche.

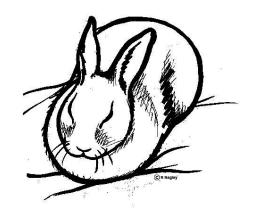
Microprint, Inc., for the royalty on purchases of Petchecks.

The following members, whose monetary and in-kind donations allow us to meet our ongoing fostering and educational goals:

Marjorie Aleva, Kirsten Matzner, Natasha Miller, Donna Waldorf, Liz Claytor, Leslie Mapes, Janet Reed, Stephanie Anielski, Judy O'Neil, Ron Steger, Ryan and Cindy Battelle, Deb Raddish, Jude May, Pey Lu, Bonita and John Chilcote.

Our new and continuing Sanctuary Rabbit Sponsors! This program would not be possible without your compassion and generosity. We wish we could acknowledge each of you individually!

As always, the **Monks Copy Shop** of downtown Columbus, for their discount on printing our newsletter.





By Sue Zimmerman



This beautiful gray rabbit has been in foster care for over THREE years. **Pumpkin** was raised for meat and was rescued from a neglect case by animal control. She barely had any human contact and was very withdrawn when we first took her in. **Pumpkin** slowly came out of her shell and began to trust us. She is still a bit on the shy side, but she absolutely LOVES free time outside of her exercise pen. We call her "The Binky Monster" as she does multiple mid-air binkies whenever she gets her free time. We think that she would absolutely flourish in the right household, one that would let her have lots of free range in the house.

Why not do something spectacular and give an older bunny a loving, forever home?? Make an appointment to see Pumpkin today! **Contact Sue Zimmerman: bhrs-sue@ohare.org**

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OUR WINNERS

We have a winner for our first-ever spring raffle -- Ama de Jong from The Netherlands! We also have, for the first time, five runners-up, each winning a \$10 voucher towards anything in artist Annette Tait's store -- Kathryn Haering, Tamera Herrod, Heather Baker, Patricia Brant, and Kim Shay.

Congratulations to all and an extra-warm thank you to Annette for making our raffle such a success! We raised \$362.00. In most urban areas in Ohio, that amount of money can spay three rabbits or neuter four. It can spay five or neuter six in most rural areas. The generosity of our members and website visitors is directly improving the health and quality of life of individual foster rabbits and putting them one hop closer to their forever home.

Happy Spring to all!

Bloat, or Acute Gastrointestinal Dilation in Rabbits Cont'd.

will continue to swallow saliva, the stomach continues to make fluid, but none of this fluid can leave the stomach. So, the stomach gradually starts to fill up with fluid. Then, the bacteria trapped in the stomach overgrow and most of these bacteria are gas forming. With time, the stomach fills with gas and fluid and becomes very dilated, like an over-inflated balloon, hence the name "bloat."

An overstretched, dilated stomach causes many lifethreatening problems. First, it is very painful. Second, the stomach becomes so large that it blocks blood flow to essential organs such as the heart and kidneys. Third, the fluid trapped in the stomach causes dangerous electrolyte imbalances. Fourth, the stomach wall becomes so stretched that the stomach itself starts to die off: eventually it will rupture, virtually popping like a balloon. This is the most common cause of death in rabbits with bloat. When the stomach ruptures, the rabbit dies instantly. Many cases of bloat are probably not recognized because of this. Things progress very quickly so that in many cases the owner reports that he went to work with his rabbit looking either normal, or "just a little off," and came home to the horrible discovery that the bunny had died. Bloat is probably the most common cause of sudden death in a previously healthy. thriving rabbit.



This rabbit is undergoing gastric decompression prior to surgery.

What is the most common cause of obstruction? The answer may surprise you and causes a lot of confusion over the term "hairball." More than 90% of intestinal obstructions are caused by a mat of hair. It is important to realize that this mat of hair is NOT the normal hair that is swallowed by the rabbit every day when he grooms himself. The mat of hair causing the obstruction is very, very dense and resembles a little block of felt. It is usually no bigger than a large almond. It is not really known exactly where these mats of hair come from. Some believe that they are swallowed whole, as hair mats off the rabbit during grooming. Most likely, however, they are formed in the cecum. Hair that is swallowed in the normal process of grooming goes into the cecum, where it

gets compacted into a small, dense mat. Occasionally this mat of hair gets passed with the rest of the cecotrophs and is eaten by the rabbit. As you know, cecotrophs are swallowed whole without chewing. This almondsized mat now goes into the stomach where it causes no problem, but when it gets passed into the intestine it gets stuck. The usual spot is 2-3 inches from the stomach, where the small intestine naturally gets narrower. Other, less common causes of obstruction include cloth. plastic or tumors.

It is important to recognize the symptoms of bloat and how they differ from those of GI stasis. First, bloat has nothing to do with diet,

whereas many rabbits with GI stasis have been on a poor or low-fiber diet and are often fed carbohydrate treats. Since diet does not impact bloat, even rabbits on an excellent diet can be affected. Second, rabbits with GI stasis often have a history of something that recently caused pain or stress, such as illness, surgery, dental disease, or another stressful event. Although bloat can occur in a sick rabbit, most rabbits with bloat appear perfectly healthy and happy before the blockage occurs. Then – and this is key - they suddenly act lethargic or *like they are in pain*. They may initially exhibit pain by not being as social or by not wanting to move around as much. They may appear hunched up and/or grind their teeth. As the stomach gets bigger, the bloat causes more pain, and because the stomach is blocking blood flow and causing electrolyte changes, the rabbit gets shocky. A shocky rabbit looks very lethargic and is often cold. Third - and this is the second key to recognizing bloat - the rabbit very suddenly stops eating completely. Note that this is different from rabbits with GI stasis, who stop eating gradually. In contrast, rabbits with bloat stop eating everything all of a sudden.

The important thing to note is how suddenly a perfectly healthy, happy bunny stops eating completely and looks in pain or lethargic. If you notice this, it is an emergency and immediate veterinary attention is needed. The diagnosis of bloat is based on three things:

1. The sudden onset of anorexia and pain.

2. The physical examination, where a large, fluid and/or air-filled stomach can be felt. Depending on how long the intestines have been blocked, the rabbit may also show signs of shock.

3. X-rays show a stomach that is over-filled with gas and/or air, with little or no air in the rest of the intestinal tract.

The first step in treating bloat is to decompress the stomach and correct shock. To decompress the stomach, the rabbit is tranquilized and a soft rubber tube is passed into the stomach to draw off fluid and air. Meanwhile, an I.V. catheter is placed and shock treatment is begun. The next step is to decide whether or not to go to surgery. In most cases, the chances of survival are best if the rabbit is taken to surgery to remove the obstruction. In a few cases, the obstruction may pass with supportive care, but the stomach may have to be decompressed again before the obstruction passes. Also, the rabbit needs to be continually monitored, on I.V. fluids, with xrays taken throughout the day to see if the obstruction is passing. If you are lucky, the obstruction may pass, but most of the time it has to be removed surgically.

Unfortunately, even with surgery, the prognosis is sometimes poor. If the obstruction is removed very quickly, there is a good chance for full recovery. However, very often the problem is not discovered until after blood flow to the kidneys and other organs has been severely compromised. This leads to problems that may not be correctable, such as death of the stomach wall, or kidney failure from lack of blood flow to the kidneys. Sadly, many rabbits who survive surgery die from acute renal failure within 1-3 days. The veterinary care after surgery can be as important as the surgery itself or the care beforehand. Do not be completely discouraged, however. If caught early enough, the obstruction can be removed before permanent damage has occurred. The key is to recognize the symptoms of bloat and to have an experienced rabbit veterinarian who can differentiate bloat from GI stasis. Knowing what to look for can make the difference between life and death.



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Somebunny Needs YOU!



Sylvester is quite a unique looking bunny with his stripes and two-toned face! He LOVES his free time and pellets. This handsome guy would make a great addition to your home. He has lots of love to give. Why not make an appointment to meet him? Please contact Sue Zimmerman (bhrs-sue@ ohare.org) 419-355-8433.



Petite and sweet -- that's **Kelby!** Weighing only about two pounds, this-softer-thansoft mini rex will cheer up the gloomiest day as she races through her cardboard tunnel or tosses her plastic keys. Affectionate and easy to pick up, she's always ready for a serious cuddle, even at meal times. **Kelby** has already dealt with a lot in her year or so of

life. Found in the woods in early September '08, **Kelby** gave birth to four babies within days of being rescued. She was a wonderful mother and all four bunnies survived. Once her babies were weaned, **Kelby** was spayed and is now waiting for that special someone to make her New Year bright. **Please contact Herta Rodina (bhrs-herta@ohare.org) 740-797-7616.**



J.J. is a funny and confident bunny who loves to play with his toys and be around people. He weighs about five pounds, is perfect with his litter box, and is used to being around dogs. J.J. would be a good choice for a family with kids. **Please contact Kristen Doherty 440-543-4959**.



Tazwell is one of the bunnies rescued from the Elyria overcrowding situation, from one of the last litters born there (Jan – Apr 2006). Taz is a little shy, he will need time with you to warm up and develop trust. He's on the small side, weighing roughly 4.0 lbs, his full-grown weight.

He loves his bamboo paper plate holders for chewing and is perfect with his litter box. **Please contact Kristen Doherty 440-543-4959**.



Maggie-Pie (aka Maggie) is just about the friendliest bunny you will ever meet! She loves to play inside her Bunny's Magic Dream Cottage and loves to follow you all over the place. She also enjoys standing on her back feet and leaning forward at the front of her pen. This is so that you can give her her favorite thing: belly rubs! Make an appointment with

us to meet Maggie soon! Please contact Sue Zimmerman (bhrs-sue@ohare.org) 419-355-8433.



Felix (along with his brother, Oscar) was found abandoned outside a wildlife rehab center. He is a tan and white Dutch mix. He weighs about 4 lbs. and is approximately 6 months old. He is active and friendly. He has had

a full examination by a veterinarian and has been neutered. Please contact Kristi Cole (bhrs-kristi@ohare.org) 330-484-8416.



Esther is a beautiful dark brown agouti girl with long ears that stand straight and tall. She is an independent spirit with a mind of her own, and she'll keep you amused for hours as she hops about and exerts her assertive personality. She weighs about 5 lbs and is perfect with her litterbox. Please contact Kristen Doherty 440-543-4959.



Ashie is a small, young rabbit who is very active, so she needs lots of toys and lots of free time to burn off energy! She doesn't mind being held for short periods, but she is most happy running around and exploring! Please contact Sue or Keith Zimmerman

if you'd like to meet Ashie (bhrs-sue@ohare.org or bhrs-keith@ohare.org) 419-355-8433.



Oscar (along with his brother, Felix) was found abandoned outside a wildlife rehab center. He is a tan and white Dutch mix. He weighs about 4 lbs. and is approximately 6 months old. He is active and friendly. He has had a full examination by a veterinarian and has been neutered. Please contact Kristi Cole (bhrs-kristi@ ohare.org) 330-484-8416.

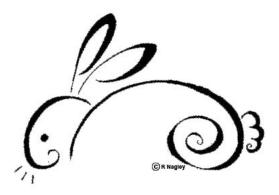


Jelly Bean is a female black lop and we think she's around a year old. She is very active, especially at feeding time. She has lots of energy and loves exploring and interacting with people. JB has a beautiful black coat and likes to be groomed. If you'd like to meet JB,

please contact Sue or Keith Zimmerman (bhrs-sue@ ohare.org or bhrs-keith@ohare.org) 419-355-8433.



"Izzy" cute and adorable or what? Yes, he is! Meet Izzy: this four pound gray dutch bunny is as sweet as he is cute and adorable. And he has excellent litterbox habits too. "Izzy" going to be a part of your family? Please contact Michele Roth Kerley (bhrs-michele@ ohare.org) 859-261-0556.

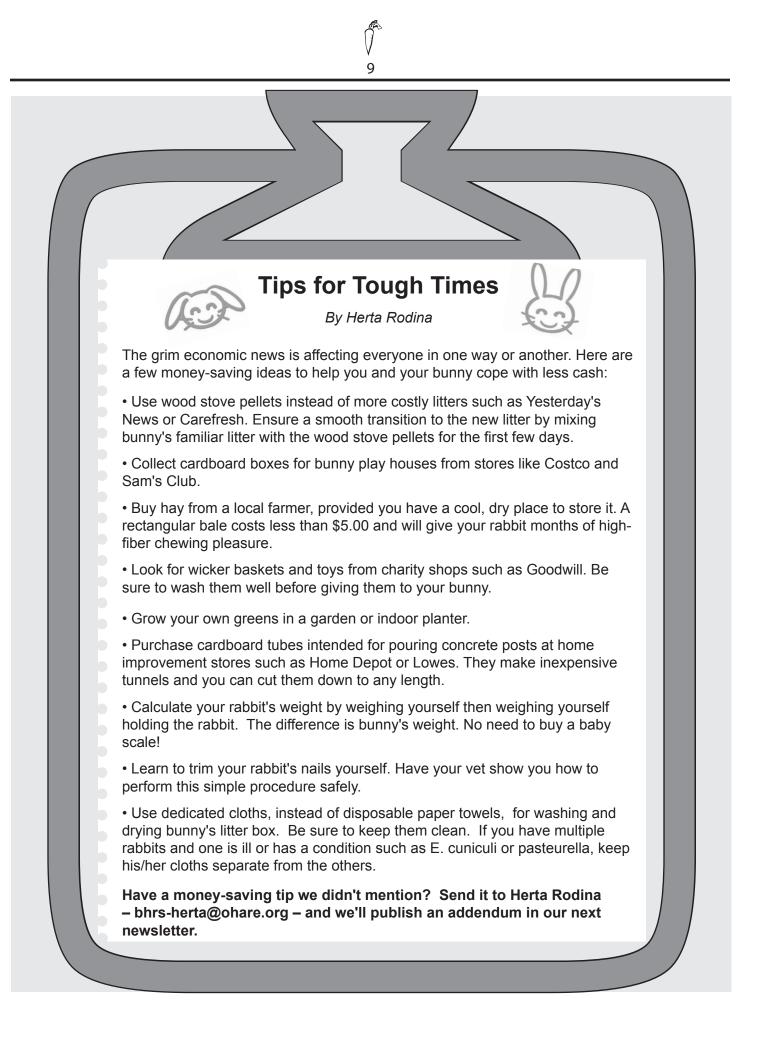


Adopted!



Jongee is enjoying the company of his girlfriend, Trixie, in his wonderful home with Erik and Marla Mohr.♥ Lucy is hopping around her forever home with the Smith family in Toledo, OH.♥ Kristen Beck has welcomed Benji into her home and heart. Benji bonded instantly with Kristen's bunny, Poopsy. After 3 long years in foster care, we are thrilled for Benji!♥ The "tiny lionhead pair", Risa and Otani, recently became permanent fixtures of John and Karin's new home in Wooster.♥ Rob and Kim, longtime Buckeye HRS supporters, have adopted Freud into their lives and their home in Twinsburg; he keeps them amused with his hilarious "sideways dance step."♥ After 1.5 years in foster care, Diva has finally found her special place with Sherri in Parkersburg. She loves the view from the sunroom and is quickly becoming pals with her new canine and avian housemates.





Getting to Know ... Karen Salvagno

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(Part Three in our occasional series on the amazing individuals who volunteer for the Buckeye HRS)

I got my first rabbit about fourteen years ago. He was a Holland Lop named Flopsy. One of the guys at work was getting out of breeding rabbits and was giving them away. I fell in love at first sight. Flopsy was an extremely friendly, easygoing bunny. I kept him in a cage in my living room. When I was home, he had free run of the house. Flopsy was that perfect bunny who only did his business in his cage and never chewed on anything. I learned from someone at work that you could spay and neuter rabbits, so I did have him neutered. There wasn't much information on the internet at the time, so I just fed him pellets. I didn't know rabbits should have hay and veggies.

A short time after I got my first rabbit, I was at a wool festival and another breeder was selling Netherland Dwarfs. Yes, I bought one. I simply didn't know that adopting a rabbit was an option and that pet rabbit over population was a serious problem. I picked a female and Flopsy immediately bonded with her. I named her Penelope and had her spayed shortly after bringing her home. So now I had a bonded pair living in a cage in my living room with free run when I was home.

About a year after that, I became interested in alpacas and decided that it would be fun to have an angora rabbit, so I could have that fiber as well. I got a German Angora and named her Tassels. She ended up bonding with my first two rabbits and now I had a bonded trio. I moved them downstairs and they had full run of the basement all the time. Unfortunately, Tassels had E. cuniculi and lived for only three years. I adopted several more rabbits over the years, and at one point had eight rabbits in a large family room with the metal puppy pens as their living quarters. I currently have a bonded pair (Flemish Giant and mixed) and a single Dutch rabbit who have 4x8 areas in our basement adjacent to our family room. When we are downstairs, we let them run around with us. Along with our three rabbits, we have five dogs, four cats (one indoor and three barn cats), six alpacas, and three llamas – definitely a multi-species household. Thank goodness my husband of ten years is an animal lover also!

I discovered Buckeye House Rabbit Society on the internet about twelve years ago. Among other things, I learned that rabbits need hay and veggies. It was also nice to discover that there were many people out there with indoor rabbits running around their home. Soon after joining, the person who was taking care of the gift shop could no longer do it. So when the call came for a volunteer to take over the gift shop, I volunteered. I have been doing it ever since.

As the gift shop coordinator, I am responsible for keeping the merchandise at my house, mailing out orders as they come in, and bringing the gift shop items to events such as the Buckeye HRS picnic. I also keep Kristi Cole up to date on what we have in stock and I let David Sharpe know when the website needs to be updated.

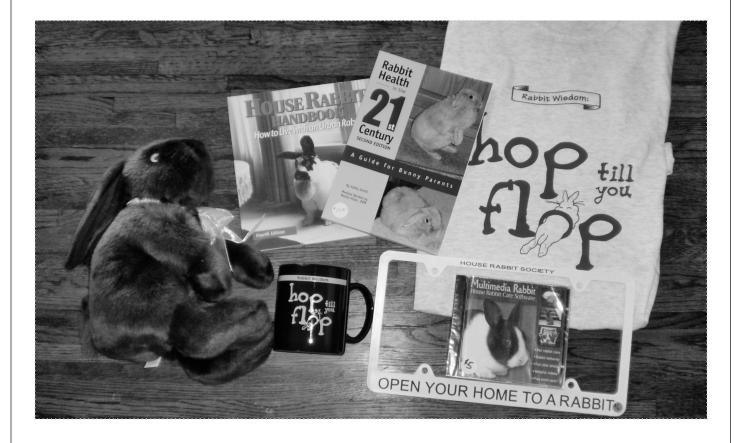
Over the years, in addition to taking care of the gift shop, I have helped in other ways as well. I have mailed out information packets and helped out at events. I have volunteered at largescale rescues and transported rabbits. I have temporarily fostered rabbits and cared for sick ones. I have donated hay and feed. I have also adopted quite a few of the bunnies in foster care. I have had some memorable times over the years. I remember when the Portage County APL seized a lot of rabbits from a backyard breeder. We went there to help them assess the rabbits' health and clean cages. We had to write down everything that was wrong with each rabbit, so that charges could be filed. I ended up taking home several rabbits and temporarily fostering them. One was very ill with a severe respiratory infection and another had very bad sore hocks. With the help of veterinary care and antibiotics, I nursed them back to good health.

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Another time, I helped out at a home and brought hay and feed. I also transported rabbits so they could go to other foster homes. We could only take a few rabbits at a time, so we had to leave remaining rabbits with the owners until we had room. The last thing I did for that huge rescue was to retrieve the last six rabbits on a very windy and snowy day. If I hadn't picked up those rabbits that day, at least one would have died, since she had no cover from the terrible wind and snow.

Helping out at events was also fun. We had good times talking together and providing information about house rabbits and their needs. It was a great opportunity to meet some interesting people and dispel some myths about proper indoor rabbit care while also stressing the importance of spay/neuter.

Volunteering has been very rewarding. Even though I can't be a full time fosterer, it has been gratifying to know that what I do does help the rabbits. I pitch in where I can and I know it is appreciated.



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Your \$33.00 annual membership in the Buckeye HRS includes:	Please make checks
 National membership (\$18.00) and 3-4 issues of the <i>House Rabbit Journal</i> Local membership (\$15.00) and issues of Harelines If you are already a national member, your local fee is \$15.00 	payable to: Buckeye House Rabbit Society
□ I would like to donate \$ to help a foster rabbit (vet care, supplies)	P.O. Box 5767
 I would like to donate \$ in memory of The grieving family receives an acknowledgment of your gracious gesture. 	Athens, OH 45701 All donations are
I would like to volunteer to:	tax-deductible.
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□ Help at Buckeye HRS booth at Pet Expos and fairs □ Other	
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City, State, Zip Phone	
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Bunnies' names and special dates	



Buckeye House Rabbit Society P.O. Box 5767

Athens, OH 45701



Buy a bunny a little time...