



Rabbit Bloat is a condition which is only too familiar to the breeder. It is a condition where the animal becomes 'blown-up' by the accumulation of a large amount of gas in the abdomen. There are undoubtedly a number of causes which produce this disorder. It may be produced by feeding an excessive amount of fresh young Lucerne or clover, and it has been suggested that young white clover will always produce the condition, although this is not proven. The condition is certainly not infectious, but there appears to be, in some cases, an inherited predisposition.

The rabbit sits huddled in a corner and is very inactive. The coat appears dull and the eye glazed. In some cases the rabbit is exceptionally thirsty and will consume quantities of water, although all food is refused. The abdomen becomes swollen with gas and the animal often

grinds its teeth in pain. Death

usually results after a day or two from excessive pressure on the lungs and heart.

In some cases the stomach may rupture. A second form of the disorder is known as mucoid enteritis, and in this form a quantity of mucous is produced in the intestines and forms a gelatinous mass. Although a considerable amount of research has been carried out, the causes of the disease have not been traced, and no reliable treatment has been discovered. The rabbit will benefit if made to take exercise, and massage with a good liniment which produces a slight irritation on the belly has been found to help. The most reliable treatment, which has been efficacious in more than half

the cases in which it has been tried, is the use of an enema of soft soap and water. Pure green soap is dissolved in warm water, and the solution injected carefully into the anus with a rubber bulb ear syringe.

The recent use of antibiotics has been found to reduce the amount of bloat greatly, in some cases by as much as 75 percent.

A rare disease, which has as its main symptom, the production of bloat is enterotoxaemia, which is a bacterial disease in which the kidneys become soft and pulpy. This trouble almost always occurs when animals are being grazed in Morant type hutches and in cold weather. The eating of frozen food appears to cause some

damage which enables bacteria to gain entrance into the intestinal wall. No treatment is available for this condition.

<http://www.petcaregt.com/rabbits/rabbitbloat.html>

True

bloat (not to be confused with stasis/ileus - reduced motility of the intestine, or the presence of some gas in the digestive system caused by food) is a dreaded condition in rabbits, with poor prognosis. True bloat is probably the most painful disorders that a rabbit can suffer from, and rabbit savvy vets often opt to humanely put the rabbit to sleep, to spare it more suffering.

Bloat

is due to an abnormal collection of gas that leads to an extreme distension of the stomach, and/or or cecum. The stomach feels hard and the rabbit looks like a "balloon". It can make noised like a "waterfall". The rabbit shows signs of terrible pain and has difficulties to breath properly. When bloat reaches a certain point in rabbits, it becomes irreversible. This is due to the facts that the stomach wall of rabbits is not as elastic as in many other animals. The distended stomach (its volume can double) will compress the main blood vessels that lead blood to and from the heart. Blood flow becomes irregular, and rarely blocked, causing disturbances of the cardiac rhythm. At this point, the condition is fatal.

Causes

of bloat remain unknown. It may related to overeating, exercising immediately after eating are suspected in most animals, lack of fiber in the diet, change of diet, excessive drinking or stress, or result from a pyloric blockage or other digestive problems.

Once

fully bloated, most rabbits do not survived longer than a few hours to a day after diagnosis. Opioid pain drugs, fluids, antibiotics and simethicone bring

little to no relief. Putting the rabbit on its side may help. A handful of rabbits were saved by intubation with a rubber catheter and aspiration of the content and gas of the stomach. The majority died within 24 hours after relief of pressure on the stomach. Rarely, when intubation is difficult, excessive vagal stimulation caused a rapid death of the rabbit.

When

in uncertainty about bloat, if the rabbit is hypothermic or not, refrain from feeding it, to avoid overload an already distended stomach, a compromised digestive system, and contact your vet asap.

http://www.medirabbit.com/EN/GI_diseases/Mechanical_diseases/bloat.htm

Bloat is a condition where the stomach becomes stretched by excessive gas content. The gas is caused by the bacteria in a rabbit's stomach multiplying excessively as a result of incorrect feeding. This may be because the rabbit has eaten wet green food or grass clippings, mouldy hay or simply as a result of irregular feeding.

- hard, swollen stomach
- shortness of breath
- restlessness

Bloat can be fatal within a very short space of time and can only be treated by a vet.

Avoid feeding your rabbit wet green food and keep to a regular feeding pattern with lots of hay. Never feed your rabbit grass

clippings.

<http://www.bunnyhugga.com/bloat.html>

One

of the most disturbing conditions any bunny parent will face is GI Stasis. This condition usually develops gradually, is marked by a slowdown in GI motility, and now offers a good prognosis since a proven medical protocol has been established. The best advice I can give anyone is to follow Dana Krempel's guidance in her article, "[GI Stasis: The Silent Killer.](#)" This article provides crucial and lifesaving information for anyone helping their buns through this ordeal.

I contend there is an even greater threat, and one that is more difficult to recognize: Bloat. My husband and I faced this frightening ordeal with our 5-year old minilop Pokey in July 2002. One day he was fine and the next day he almost died. Since then, I have made it my focus to learn everything I can about this poorly recognized and usually fatal condition. I have seen more buns succumb to bloat in the past year, making me realize how important it is to educate as many people as possible. I have conducted a literature review, albeit limited, and spoken with many people in an effort to understand and try to make sense of this condition. The only mention of bloat in the literature is from the UK, most notably by veterinarians Paul Flecknell and Frances Harcourt-Brown. I have based this paper on this literature, but have also taken some liberties based on my personal experience, and my professional education and training. The rabbit's GI tract is subject to many threats by its very nature. It remains my belief that bloat is an entirely different phenomenon from GI Stasis, one that requires immediate veterinary intervention. Here's our story.

One

day, our minilop, Pokey, was eating, drinking, eliminating and playing normally. The next morning we noticed he had not eaten his 11PM salad from the night before. He was hunched up in the back of his room and didn't want to come out

and run which was very unusual for him. I immediately checked for bowel sounds (which were diminished), gave him some simethicone that he did not respond to, and called our vet. Our vet examined Pokey that same morning and confirmed my suspicions of GI Stasis. Pokey's temperature was 99.4F with an ear thermometer (this was a significant finding, but was not addressed at the time). His abdominal x-ray revealed an overly distended stomach with a huge, well-defined gas bubble inside the stomach. In comparison, this x-ray was a lot different looking from Pokey's previous x-ray during an episode of GI Stasis. I had never seen anything like this in rabbits despite looking at years of rabbit x-rays in my vet's office. And it developed overnight! Pokey was sent home to reduce the stress of being at the vet's. We gave him subcutaneous fluids, simethicone, and limited his food intake to just hay and water.

Pokey

continued to lie around for a few more hours and then we heard his teeth chattering. It was such a loud noise, I didn't realize what it was at first. I grabbed him out of his room, took his rectal temp, which was 97.7F, placed him on a heating pad, and called our vet. Within minutes we were sure Pokey was going to die. His eyes were dull, he was having trouble regulating his temperature, his breathing was fast and labored, and the pain was overwhelming him. My husband and I rushed him to the vet, wrapped in towels. They were waiting for him and immediately gave him a shot of Torbutrol (butorphanol) for pain. His rectal temp had increased to 100F. That's when my vet told me if Pokey were a dog, she would think he had bloat. This condition is a medical emergency that many dogs and cows succumb to. The prognosis is poor in rabbits.

Fortunately,

and rather miraculously, with continuous at home care aimed at relieving the symptoms, Pokey recovered. Other buns have not been so lucky. I believe this is because most vets in this country do not realize or understand that bloat exists in rabbits. Pokey's story is not unusual. Since his bloat episode, many people from across the country have contacted me with similar stories. After 2 foster rabbits developed bloat and died within hours of its onset in September 2003, I realized how imperative it is to get this information out.

GI Stasis VS Bloat:

Having

cared for many rabbits through the years, I have witnessed GI Stasis and Bloat. There are subtle differences between the two conditions, but prompt recognition and treatment determine the outcome. Whereas GI Stasis has a prognosis of fair to good, the prognosis for bloat is poor to guarded.

GI Stasis develops

slowly, and it is usually several days before you suspect that something "isn't right" with your bunny. You may begin to notice that he eats his food more slowly, or may even leave his food and come back to it later. Food preferences may change and you may find him preferring hay to his usual meal of pellets and fresh veggies. By the time this happens, your bun is most likely on his way to developing stasis. In my experience the first real indicator that your bun "isn't right" is in his litter box. Subtle changes in fecal pellets, that is, a smaller size, a change in shape from perfectly round to oval, a change in consistency or quantity, often indicates a disruption in digestion. This is the reason it is so important to know what is "normal" for your bunny. It helps you identify the "abnormal" more quickly. While there are many reasons for GI Stasis to develop, you usually have time to get to the vet and initiate medical treatment of subcutaneous fluids, simethicone, analgesics for pain, and possible motility drugs if there is no indication of an obstruction.

Unlike

GI Stasis, bloat happens suddenly and without warning. One minute your bun is eating, drinking, eliminating, and playing normally, the next minute he is depressed, moribund, and stops eating, drinking, and playing. Just like that. A bunny rapidly decompensates with bloat, and immediate veterinary intervention is crucial to his survival. A lower than normal body temperature (under 100F) usually occurs causing the bun to go into shock. Current literature from the UK reveals bloat is caused by a blockage or obstruction in the GI tract, that may be due to a foreign body (carpet) or trichobezoar (hairball). During postmortem exams on rabbits whose cause of death was GI Stasis or bloat, Dr. Paul Flecknell found an obstruction at the exit to the stomach (pylorus or duodenal flexure).

The tissue at this site was often dead (necrotic). He also found instances in which the lining of the stomach had eroded with bleeding present. While not specifically documented, this creates the possibility that ulcers and/or scar tissue could be precursors to bloat. A study by Hinton (1980) showed 7% of all rabbits necropsied had gastric ulcers. Considering the nature of rabbits as prey animals, it makes sense that rabbits could and do develop stress ulcers. It is known that gastric ulceration in rabbits can develop from pain and fear due to catecholamine (epinephrine) release, and also with reduced gut motility such as repeated episodes of stasis. I realize this is mere speculation on my part, but believe this is possible and that more research is needed.

Diagnosis:

Upon

physical exam, symptoms of bloat include dehydration, an "abnormal" feeling abdomen, that is, distended from an accumulation of gas (tympany), and a low body temperature. While blood work may also be done, an abdominal x-ray is the most diagnostic tool. X-rays carry a significant risk in bloat because the rabbit is often on the verge of cardiovascular collapse due to the pressure the gas places on the chest cavity. Care must first be taken to stabilize the rabbit with fluids and pain meds. It is my experience that rabbits often become non-responsive due to the electrolyte imbalances, pain and shock associated with this condition. Harcourt-Brown states electrolyte imbalances may cause the rabbit to experience twitching, blindness and convulsions in the terminal stages of this condition.

The

x-ray of a rabbit suffering from bloat reveals a hugely distended stomach located in the upper abdominal area, and may also reveal gas shadows in the small intestine closest to the obstruction. The enlarged stomach places pressure on the chest cavity and compromises lung and heart function. The compression of the chest cavity makes it difficult for the rabbit to breathe, and often leads to heart failure (cardiovascular collapse). However, heart failure is usually secondary to the gas buildup in the stomach and may be the reason bloat is often misdiagnosed.

Treatment:

Since

Pokey's bloat episode, I have been fortunate enough to have my personal vet research and establish a medical protocol for bloat that increases the rabbit's chance of survival. While treatment is not always successful, it provides the rabbit with relief from the gastric distention, and pain medication to deal with the excruciating pain of bloat. This is a comfort to me and I am very grateful to her. None of the other vets in the Washington, DC-Metro area, including the many emergency vet hospitals that treat rabbits, provide this life saving treatment.

When

the diagnosis of bloat has been determined, the rabbit needs to be given warmed Lactated Ringers solution, preferably intravenously. Rabbits cannot absorb subcutaneous fluids when they are in shock. In addition, an external heat source to regulate body temperature, and analgesics for pain are also necessary. Once the bunny's condition is stabilized, a stomach tube is placed to decompress the stomach. My vet usually uses a red rubber catheter (Fr 15). A 20 cc syringe usually provides enough suction to withdraw the stomach contents manually. A rabbit's mouth and esophagus limits the size of the stomach tube that can be inserted, so that in many cases the small sized tube becomes clogged with food particles and fur. If this happens, the tube needs to be repositioned and gently irrigated until the stomach contents are withdrawn. A rabbit's stomach should never be decompressed with a needle puncture, or peritonitis and death can occur.

When

the rabbit responds to treatment, he can be given simethicone and have gentle abdominal massage to break up the gas bubbles. As improvement continues he should be encouraged to engage in some mild exercise to reestablish normal GI movement, and provided with a wide variety of veggies to encourage eating. Interest in exercise and eating is a good prognostic sign. There is a possibility that gastric distention associated with bloat can recur. I know of one bun who re-bloated 2 more times during a two-day period and eventually succumbed to this condition. Usually if a rabbit bloats a second time within a

two day period, my vet encourages euthanasia. Surgery to remove the obstruction should only be used as a last resort.

What To Look For:

This

article was originally written in layman's terms so everyone would be able to understand the phenomenon of bloat. I now realize the importance of sharing this information with your vet and have included more comprehensive and technical information. However, if you are unable to get to a vet in time, or unable to find a vet willing to tube your bunny, the following is what I learned when Pokey went into bloat and the symptomatic treatment I provided.

1.

Be alert to a very sudden change in eating habits. If your bun stops eating his usual meal of pellets and veggies without warning, give him simethicone and call your vet immediately.

2.

Check your bun's temperature with a rectal thermometer. The ears regulate the the body temperature. If they start to feel cool to touch, chances are his body temperature is falling. A normal rabbit temp is 102-104F. Any temp under 100F is a medical emergency. This usually means the rabbit's system is shutting down and he is going into shock. Grab a heating pad (on low), and wrap it around your bun. When you transport him, wrap him in warm towels to maintain his body heat.

3.

Get your bun to the vet immediately! Often the pain is so great, the bun gives up. A shot of pain medicine was crucial to Pokey's recovery.

4.

Fluids are necessary to keep the bun hydrated and to help overcome shock. The quickest and least stressful way to accomplish this is with subcutaneous fluids. Your vet can show you how to do this at home. If your rabbit's condition is too far deteriorated, IV fluids are necessary because subcutaneous fluids cannot be absorbed. Simethicone is necessary to relieve gas buildup. Laxatone is often prescribed but its use is controversial. We gave Pokey a small amount of Laxatone after he was hydrated and it seemed to help. Additionally, Metaclopramide or Cisapride activates the GI system. DO NOT give this without your vet's knowledge because the stomach can rupture if an obstruction is present.

5.

Keep your bun in a warm environment. We placed Pokey in a small room upstairs and closed the vent to the AC. The room temperature was 81F all night. I believe this helped him to stay warm.

6.

Give your bun a small area to run. Pokey was allowed to roam around if he wanted to, which he did. Exercise encourages the GI System to move. In addition, a gentle stomach massage can help break up the gas as well.

The next morning (Day 2)

Pokey's

temperature was 102.4F and he started to eat hay and passed tiny, misshapened fecal pellets. As previously mentioned, I gave him a large dose of Laxatone, which helped him. By noon, he passed a few blobs of foul smelling goop and then passed gas the rest of the day. His bowel sounds became more active and the next day we started feeding him pellets that he ate directly from his food bowl. His diet was gradually advanced and by Day 4, Pokey was back to normal. In comparison, it took 2 weeks of constant home care and daily treatment before he recovered from GI Stasis last year.

Having

been through these two medical situations with Pokey in the last 1-1/2 years, I firmly believe Bloat can be a primary disorder which can occur suddenly and without warning, as well as a complication of GI Stasis.

A

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For a completed article and a list of references, please email:

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// Change User Name and Domain
Name      username="health"      at="@"      domainname="bunnylu.org"      do
cument.write(""+username+""+at+""+domainname+"")
health@bunnylu.org
```

<http://www.bunnylu.org/bloat.php>

[GI Stasis:](#)

[What Everyone Should Know](#)

[What is it?](#)

Bloat:

From:

<http://www.bunnylu.org/bloat.html>

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FROM DANA KREMPELS, Yahoo

Answers:

No one is really sure about the ultimate cause of bloat. It may be bacterial at first, with Clostridium species (possibly perfringens, which produces a lot of gas) producing gas. But because the rabbit intestine just posterior to the stomach takes a very sharp turn, it appears that if the stomach has even a slight blockage or gas buildup that pinches that turn just the wrong way, an irreversible bloat can occur. The only relief is gastric gavage (sticking a tube down the throat to suction out liquid and gas) or even puncturing the stomach with a needle through the body wall.

*... Dana
Krempels, Ph.D*

Gas: From:

http://www.ontariorabbits.org/hot_topics/hint_9.html

Rabbits can - and do - suffer from gas. If ignored, painful gas can cause a rabbit to stop eating and go into gastrointestinal stasis, the slowing or complete cessation of normal intestinal movement. This can be fatal if not treated. Gas can also be the result of stasis.

Rabbits that have gas often exhibit one or more of the following symptoms: loud gurgling noises coming from the rabbit's stomach; hard, taut stomach; lethargy; and significant decrease in appetite. Often, this is the first sign of gas. When suffering from gas, some rabbits sit hunched up, with their eyes partially closed, some will sit with their stomachs pressed into the floor, or upright with an unnaturally straight posture.

Important: *Gastric Dilation (Volvulus) or severe 'bloat' is not the same as a gas episode. With bloat, the stomach becomes extremely hard and grossly distended which can cause the blood supply to be cut off from the stomach or intestine. Bloat can quickly lead to shock and death. If you suspect bloat, do not massage the rabbit's abdomen, which could make the situation worse. Seek immediate veterinarian attention.*

How To Treat ?

***Please note:** This protocol is not appropriate for a rabbit suffering from **bloat** (very hard, distended stomach).

Bloat must

be **immediately** resolved by a veterinarian.

**Do not attempt to treat
bloat yourself.**

Do not attempt to massage a bloated bunny:
can lead to lethal complications.

Basic At-Home Protocol for Rabbits with Gas

- **Simethicone:** Baby gas meds. Required.

- **Hydration,**

Hydration, Hydration: If they will drink on their own, try spiking water with a bit of apple juice or vanilla extract.

If they aren't feeling
cooperative

, syringe some water into their mouths.

If you

have the knowledge to do sub-cutaneous injection, it is more efficient and

faster than oral rehydration.

- **Pedialyte** (children's rehydration drink) is super for re-hydrating buns.

-

Make with the Fibre: Break out the canned pumpkin, and let them eat on their own. Again, uncooperative buns can be coerced with a syringe.

-

Pro-biotics: Bene-bac will help balance internal systems (gut flora).

- **Get some exercise:** Let bunny out for a scamper, play an active game together to get the body moving both inside and out.

- **Vibration**

therapy: When a bun is gassy (stomach distended, but nothard), a gentle tummy rub or massage with a vibrating toothbrush can make break up the gas quite a bit. Plop them on top of the washing machine or dryer for more vibration.

- **Keep warm!** Methods include towels warmed in the dryer, a Snuggle Safe, a pop bottle full of warm water, a hot water bottle, a rice sock (fill an old sock with rice and microwave a few minutes), or supervised use of a heating pad (to make sure bunny doesn't chew on it).

As always, be sure to consult with your veterinarian should the situation not improve significantly. Remember, no gut motility drugs(Propulsid

[Cisapride]/Reglan [Metoclopramide]) should be given without an x-ray for blockages. Such administration may have lethal consequences.

Read a more in-depth version of the protocol here: [GI Stasis: What Everyone Should Know](#)

Articles

Rabbit

References: Gas, Ileus and Stasis, Bloat

<http://homepage.mac.com/mattocks/morfz/rabrefs.html#stasis>

Relieving

Gas Episodes

http://www.ontariorabbits.org/hot_topics/hint_9.html

Bloat

<http://www.bunnylu.org/bloat.html>

When A

Rabbit Stops Eating: Gas Remedy

<http://vrra.org/gasremedy.htm>

http://rabbitsonline.net/view_topic.php?id=11931&forum_id=10

Simethicone

- Extra Strength Maalox GRF Gas Relief Formula
- Baby's Own Infant Drops
- Maalox GRF Gas Relief Formula
- Ovol
- Ovol-40
- Ovol-80
- Ovol-160
- Phazyme Drops
- Phazyme-95
- Phazyme-125

Generic name product may be available in the U.S.

Dosage:

Simethicone Liquid: 1 cc by mouth 2 times daily will help keep the gas moving through your bun's digestive tract.