



Bunny 201

Georgia House Rabbit Society

Course Topics



- Observing Your Bunny
- The Rabbit Digestive System
- Gastrointestinal Slowdowns, Bloat
- The Bunny Home Health Exam
- Administering Medication (Oral, Injections)
- Administering Fluids
- When You Need More Than Home Care
- Recognizing Medical Emergencies
- Your Bunny Home Health Toolkit

Your Bunny's Best Health Tool is YOU!



- **YOUR** power of observation is bunny's key to long, healthy life!
- Be Sherlock Holmes. Observe your bunny's:
 - Eating times and quantities, liquid consumption
 - Posture, spots for laying down, sleeping
 - Respiration rate and sound (if any)
 - Fecal pellet size and quantity; urine color / quantity
 - Gut feel, etc.
- Check every day for one month, for you to learn what "normal" is for your bunny
- Keep a journal (reinforces observation, record for history / patterns)

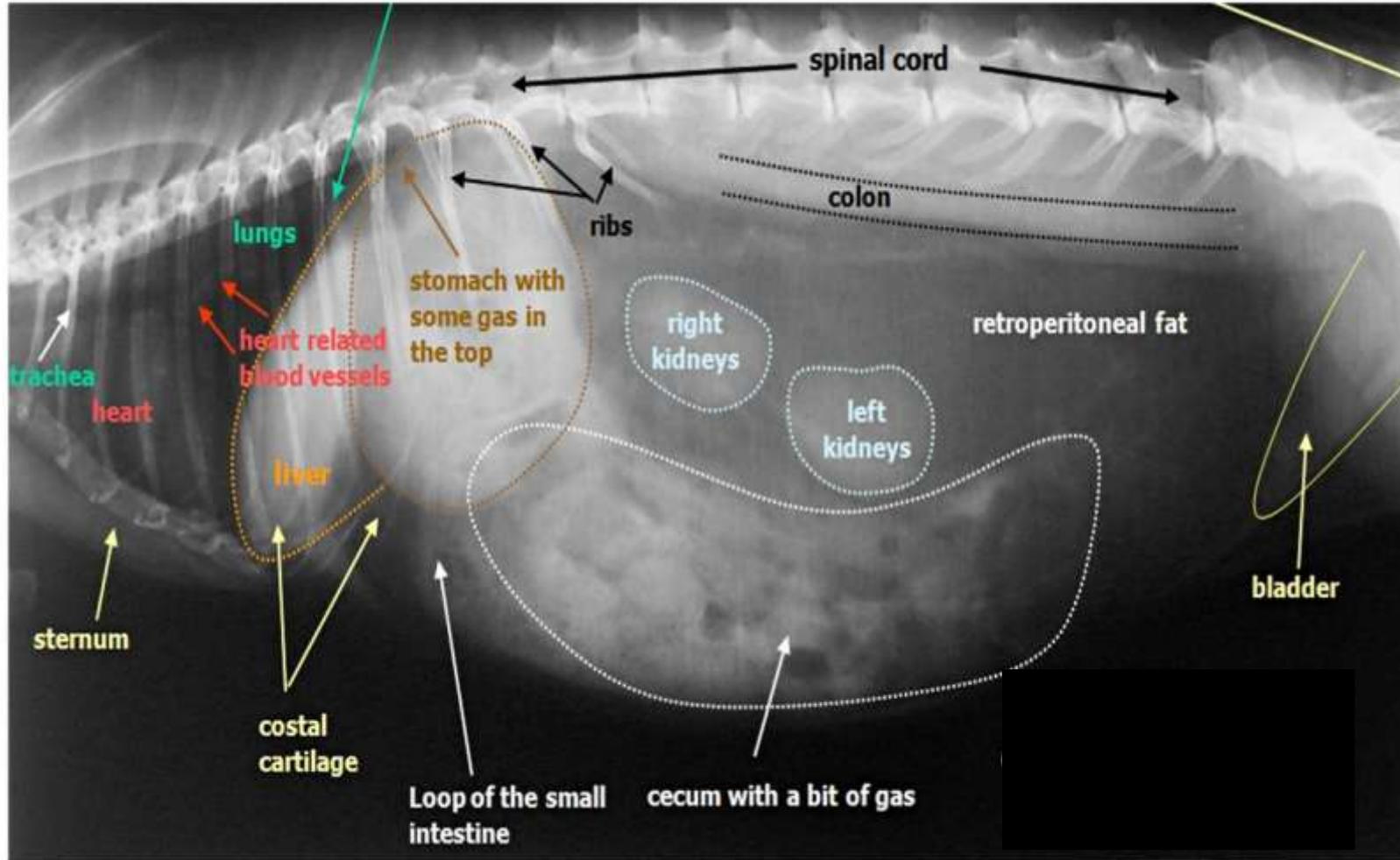
"Holmes, you see everything." To which Sherlock Holmes replied "I see no more than you, but I have trained myself to notice what I see."

The Rabbit Digestive System

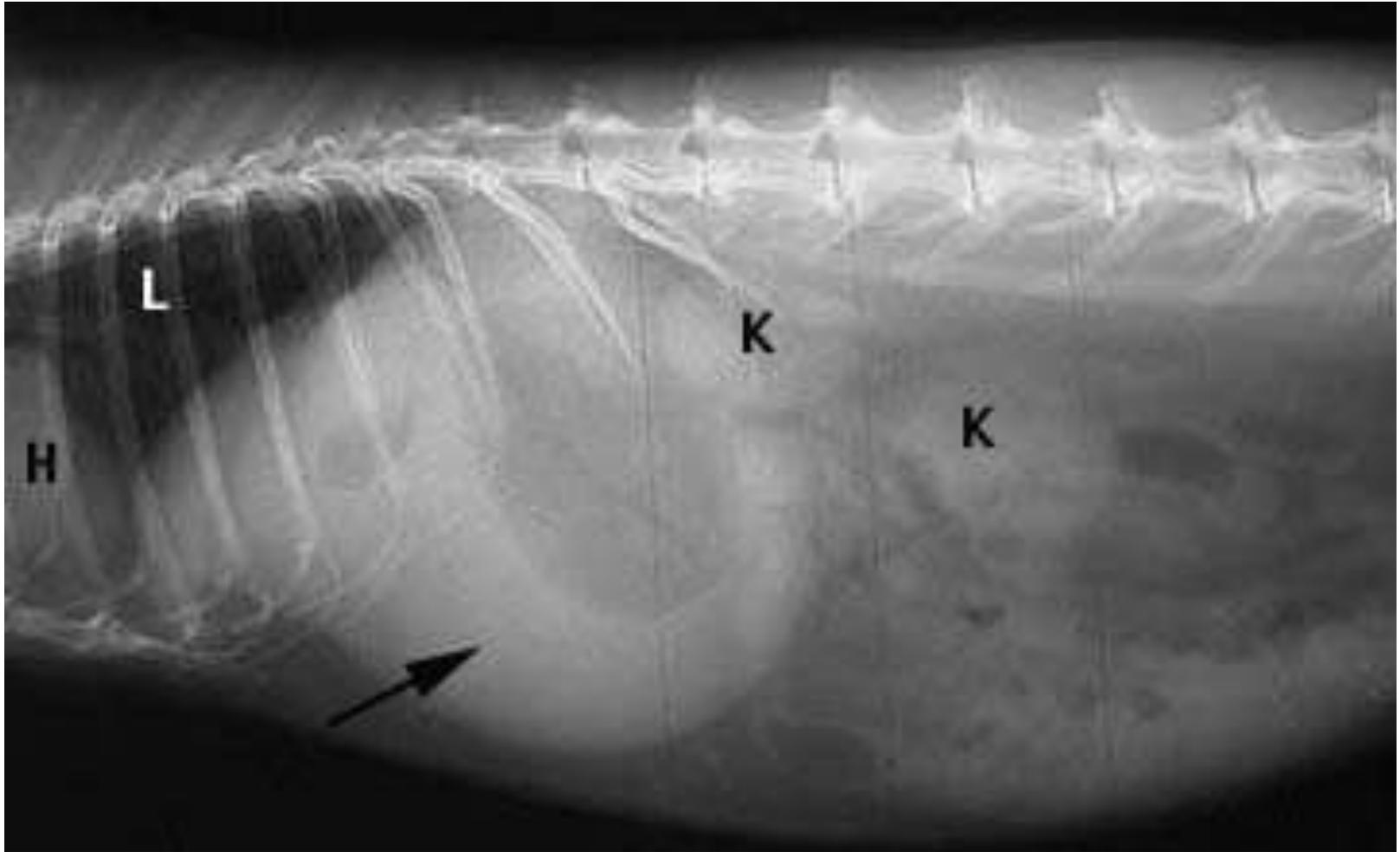


- Bloat (distended stomach / gas), stasis (gut mobility shutdown) are some of the most common ailments you will treat
- Most gut problems are from bacterial imbalance vs. blockage
- Rabbits require delicate balance of fiber, hydration, electrolytes
- Gut is easily upset by excess sugars, stress, lack of hydration, electrolyte imbalance, quick changes in diet
- Rabbits have no vomit reflex
- Refusal of food more than 24 hours is medical emergency. Rabbits can die 12-24 hours from first symptoms
- Bloat can occur from true obstruction or “functional blockage” from gut slowdown
- Past misnomer of “hair balls”. Most are undigested food material
- There is no best diet for all rabbits. Observe all your bunny’s reactions to what you feed

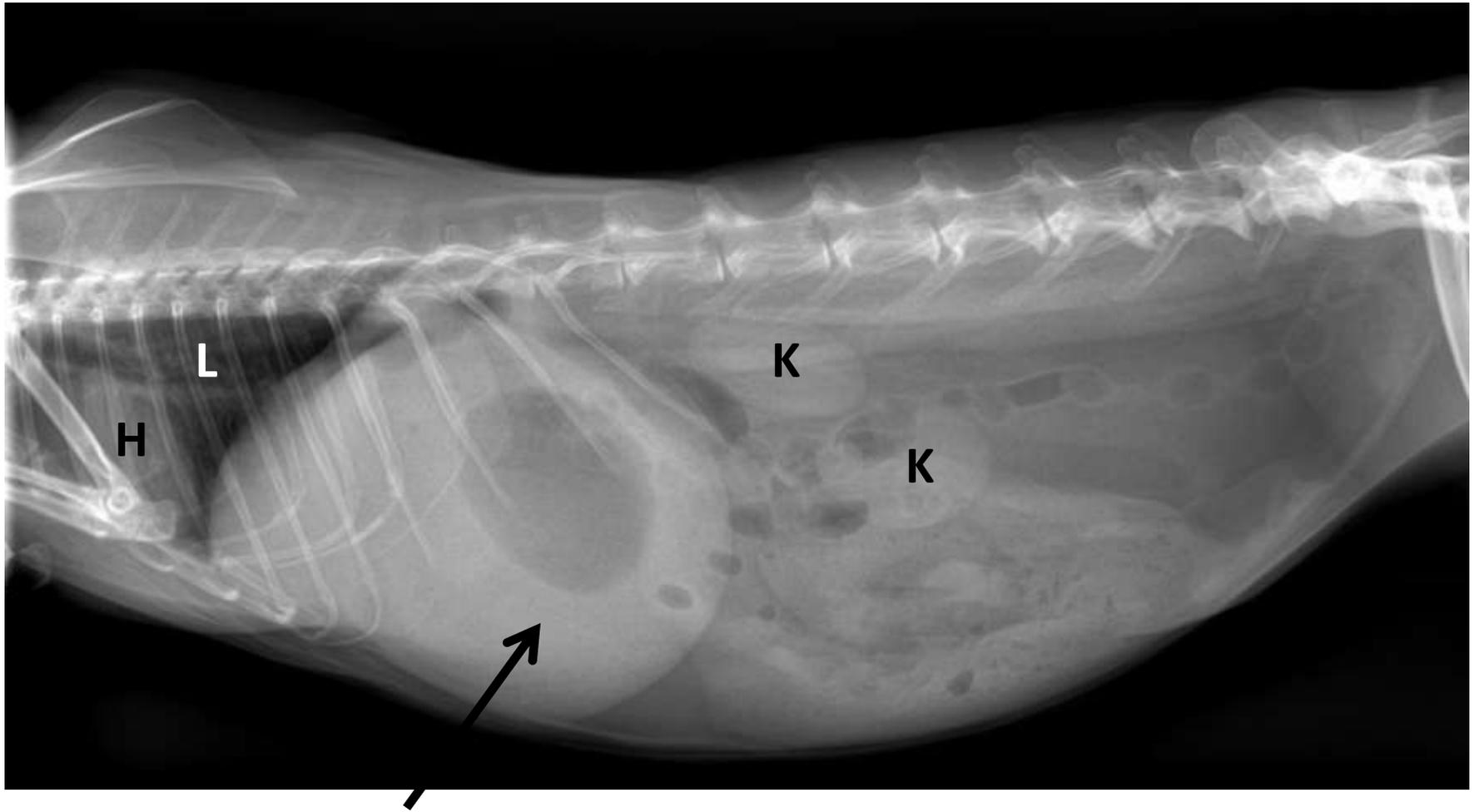
X-Ray of the Rabbit Gut



Rabbit with Bloat / Gas



Second X-Ray of Rabbit with Bloat / Gas



Distended stomach filled with gas

Common Causes Stasis / Ileus



- Stress or psychological triggers (loss of bonded companion, separation from owner, move to new territory)
- Dehydration
- Pain from underlying condition (gas, joint disease, fractures, etc.)
- Molar issues (overgrowth, abscess)
- Urinary tract disorders (infection, bladder sludge)
- Soft tissue problems (tumors or abscesses)
- Parasites (coccidiosis)
- Intestinal blockage (undigested food, foreign matter e.g. carpet)
- Insufficient fiber in diet
- Overgrowth of harmful bacteria from too rich a diet, diet high in sugars

Note your rabbit may eat relatively normal amounts of food, almost up to the time the GI tract shuts down

Recovery may take up to 2 weeks, and have fits/starts. Provide consistent gentle nursing, and try to determine cause. Ileus is a symptom, a clue of some underlying problem

Observing for Shock



- Observe respiration, lethargy
- Gums may be white or bright pink if in shock. Loud teeth grinding
- Take temperature
 - Over 104 F or under 100 F is serious medical emergency (101-103 normal)
- If temperature low, warm bunny using heating pad (only while holding), hot water bottles, towels heated in dryer, microwave safe corn husk or buckwheat pillows
- If temperature high, cool bunny with cold water bottles, air conditioning, fan, wetting ears, frozen water bottles
- Sub-Q fluids may help stabilize (warm fluids if bunny's temp is low)
- Take to emergency vet if unable to stabilize temperature, or other symptoms such as seizures, difficult respiration are occurring

Taking Temperature



- Use flexible child thermometer (**NO GLASS**)
- Lubricate with Vaseline (or some equivalent)
- Be gentle. Never force, as rectal walls are easily damaged
- Withdraw gently and slowly when done
- Normal is 101 – 103F. Treat immediately if outside normal range
- Can take 2 hours of warming to return to normal temp
- Rabbit likely to get active after returning temp to normal range, and then may have another temp drop 2-3 hrs later. Recheck
- Monitoring temp. following surgery is also critical (along with pain mgmt.)
- If lower than 97F have bunny hop around a little while and recheck. Thermometer may be against a fecal pellet, and not the tissue wall

Location to Insert Thermometer



Practice the Tao of Poo



Normal Fecal Pellets



Normal Cecal Pellets

- Observe your rabbit's fecal pellet size and quantity EVERY day
- Cecal pellets normally eaten (vitamins)
- Overproduction of cecal pellets may indicate too rich a diet or underlying medical issue
- Watch for decreased size or quantity of fecal pellets. Increase fiber and hydration if either occurs. Consider additional G.I. treatment options
- Size varies by your rabbit. Determine your bunny's "normal"
- Watery or unformed pellets indicates diarrhea and are an immediate medical emergency
- Mucus in stool may also indicate medical emergency. Mucus may occur after a period of stasis



Diarrhea / Loose Stools

Diarrhea



Mucus



Pinworms



- True diarrhea (unformed, watery fecals)
 - May signify overgrowth of toxins or underlying disease
 - Take to vet or emergency vet immediately. Do not wait!
- Loose stools
 - Occasionally cecal pellets may be soft (should not be runny)
 - Treat loose stools with ½ - 1 tsp of rolled oats in food (Plain Quaker oatmeal)
 - Eliminate all treats and sugars
 - Consider probiotics or Oxbow critical care to re-establish gut flora. Antibiotics alone may cause loose stools from disruption of bacterial flora balance
 - Cholestyramine (Questran) can be given to bind with toxins (Use especially if diarrhea or mucus is present)
 - Encourage increased consumption fiber / hay, adequate hydration
 - If repeat illness occurs or no signs of improvement in 24-48 hrs, have rabbit examined by vet. Parasites, underlying illness, dental issues, etc. may be to blame

The Bunny Home Health Exam



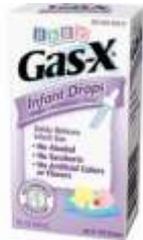
- Examine eyes (for non-clear or excessive discharge, redness of eyelids, cloudiness of retina)
- Examine ears (sores, mites, discharge, obvious external wax build up)
- Examine nose (discharge, sneezing) and front paws (for yellow staining)
- Examine front teeth (malocclusion / lack of symmetry, drooling, wet chin, bad breath) and color of gums (should be soft pink)
- Examine skin / fur (mites, sores, mats, abscesses, excessive flaking)
- Examine bottoms of feet (sores, loss of hair – sore hocks) and nails (for clipping)
- Examine “bunny privates” (discharge, caked fecal matter, urine scald)

The Bunny Home Health Exam Cont.



- Feel length of body, lumps of skin, down legs (Look for lumps, scars, wounds, hair loss, etc.)
- Gently feel the gut. Listen with stethoscope (if available)
- Listen to breathing
- Take temperature if concerned about illness (Normal 101-103 F)
- Smell if any odor present (Note strong or pungent scent by anus / scent glands is normal)
 - Keep a medical journal of all medications, illness, observations, vet visits and diagnoses
 - Take bunny to vet if anything unusual observed in your home exam, in order to receive proper diagnosis and treatment. **Rabbit illnesses can progress quickly!**
 - Take your bunny to vet for a “wellness exam” once a year. If you can afford it, consider having laboratory workup during period of “health” to use as comparison if bunny becomes ill

Treating Most Common G.I. Issues



- **Hydration, hydration, hydration!**
 - Oral fluids or sub-Q fluids (LRS, Saline, or NaCl if bunny has not eaten in 36 hours)
 - If bunny's temp. is low, warm fluids first in bowl of warm tap water
- **OxBow Critical Care**
 - Contains enzymes to break up masses, calories, liquids you add (water) and probiotics (100 -120 ml / 5 lb / day broken into 4+ feedings)
- **Banamine or Metacam for pain**
 - From your vet. Usually once per day
 - Banamine is injectable and can also reduce toxins from intestinal bacteria, and is preferred following major surgery (1-2 days dose)
 - Metacam is a NSAID, usually given orally and easiest for home or long term use
- **Simethicone (Pediatric GasX) for gas**
 - 1-2 ml once an hour for 2-3 doses, then 1 ml every 8 hours
 - Safe to give even as a precaution
- **Rabbit safe probiotic, to re-establish gut flora**
 - Culturelle, Propbios

Treating Most Common G.I. Issues, Cont.



- Reglan (Metoclopramide) or Propulsid (Cisapride) for gut mobility
 - Work on different areas of digestive track and can be used simultaneously
 - Caution to not use with full obstructions or problem with pyloric valve. Vet to determine
 - Decreasing effectiveness of Reglan with significant repeated use
 - Can not use narcotic painkillers with Reglan due to potential dangerous interaction
- **Fresh hay....fresh hay....fresh hay.....(did we say fresh hay?)!!!**
 - Offer a variety and unlimited quantity of hay (with exception of alfalfa, which is too high in protein and calcium and more likely to cause bloat)
 - Crude fiber is key to gut motility, the gut **must** have it to function
- Fresh, wet, leafy herbs can also be offered
 - Mint, basil, dill, cilantro, tarragon, parsley are all good choices
- B Vitamins from veterinarian - Stimulates appetite
- Salt lick or unsweetened Pedialyte for electrolytes
- Lactulose - laxative, or olive oil
 - May coat masses making them harder to rehydrate. Use when gut starts moving again
- Water and plenty of exercise
- Reduce or eliminate treats, sugars!



Giving Oral Medications



- Cover / hold head
- Insert at angle behind the front teeth (to avoid liquid going in lungs)
- Go slowly, let bunny swallow
- Keep Children's liquid Benadryl on hand for allergic reactions to medications (swelling, seizures, breathing problems)

Other options (more risky):

- Kneel and place bunny between legs on the floor or cradle bunny on back
- Make "bunny burrito" (wrap carefully in towel)
- Can give pills by cutting tip from 3 ml syringe; Insert bit of banana, pill and then more banana or peanut butter (pill not easily spit out.) Safer to crush pill to prevent choking



Treating Choking



- Pick the rabbit up, hold along the length of arm, with the other hand on top to steady, holding the scruff because this IS an emergency
- Swing downward with the arm that's holding the rabbit, to get 'gravity' and motion to help dislodge
- Can also stroke the throat upward toward the mouth (Clear the nasal passage and mouth by wiping away mucous)
- Once the rabbit is calmer you can syringe out mucous or other foreign matter with a bulb syringe (If you don't have one, clear as much mucous out as you can, with a damp cloth or paper towel)
- If the rabbit is small and you can hold between your hands, cup bunny in your hands and swing downward in a long arc

Giving Subcutaneous Injections (Under the Skin)



- If possible use a fresh needle if you had to draw medication from a vial (which can dull needle)
- Pull up a “tent” of loose skin, most common on scruff of neck between shoulders
- Insert needle into “tent” (90 degree angle), about half the length of the needle
- If you can, without withdrawing the needle, pull back slightly on plunger to ensure no blood appears in needle (i.e. aspirate needle to ensure you are not in a vein)
- If no blood appears, push plunger in to deliver medication
- After withdrawing needle rub skin lightly between fingers (lessens scaring and leakage of medication)
- For repeat injections, envision a clock / circle on neck and alternate site (12, 3, 6, 9 pm) to vary injection site each time
- Can also wet skin with water to more clearly see injection site

Class Practice Time

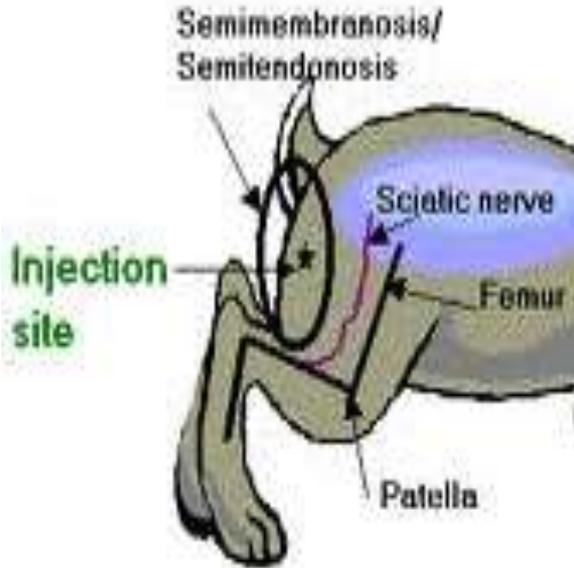


- Use bunny “model” (rubber glove stretched over bowl) to practice tenting skin and inserting needle
- Walk through each step in instructions
- Each person in class has option to practice at least one time

Questions?

- Next: Demonstration on live bunnies in our shelter, needing medications or treatments

Giving Intramuscular Injections (Into the Muscle)



- Secure bunny under your arm (more likely to struggle with intramuscular injection, as they are slightly more painful)
- Find muscle injection site by feeling with hands. Wet area, if needed, to help see
- Tense /pinch the area lightly with fingers
- Insert needle slowly and firmly, about one half needle length

- Pull plunger back slightly to look for blood
- No blood means it is safe to inject. If blood appears, withdraw needle and insert again
- Remove needle and discard



Giving Subcutaneous Fluids



- Warm IV bag in bowl of warm water (to temp 90-100 F) especially if bunny is in shock and has low temp. Keep end with port out of water
- Don't use alcohol swab (only causes pain), but ensure area is clean
- Create similar "tent" (as with subQ injections)
- Insert needle at least half the length into the skin. No blood should appear in tubing. Release "tent" and ensure needle is not poking out other side
- Hold bunny still (hand on head and rear works well)
- Administer fluids (50-100 ml per 2.2 lbs/day most common, but may vary based on hydration level)
- A build up of fluids as a bulge under the skin is normal



Giving Subcutaneous Fluids Cont.



- When done, roll skin slightly between fingers after removing needle
- Fluids will settle to lower part of body over next 30 – 60 min., and then be absorbed in next 24 hrs
- May need to treat multiple days in a row, or every other day
- SubQ fluids not recommended for bunnies with heart conditions or breathing difficulties
- Ask your vet for an un-punctured bag of LRS (lactated ringer's solution) solution (or normal saline if your bunny has kidney failure, or NaCl if bunny has not eaten in more than 36 hours) to keep at home. Needles range in size 14-20. "Green" 18 works well
- Refrigerate bag once punctured, and use within 1-2 months. Discard if cloudy
- Use a fresh needle each time (limits pain and infection risk)
- Fluid administration into a vein should only be attempted by your vet

When to Consult Your Vet (within 24 hours)



- Not eating in 24 hours, audible sounds from gut without stethoscope
- Mucus or parasites in stool
- Tilted head, loss of balance, jerking eye movements
- Repeated head / ear scratching or head shaking
- Partial paralysis or immobility, lethargy
- Repeated sneezing, nasal discharge or eye discharge
- Straining to urinate or urine that appears very white or gritty (excessive calcium buildup / sludge)
- Loud teeth grinding, hunching in pain
- Loss of interest in treats, favorite foods or favorite activities
- Sores on bottom of feet (sore hocks)

- Consider alternative medicine (e.g. acupuncture) as additional support after consulting your veterinarian

Medical Emergencies



Do not wait for regular veterinarian appt. if any of these are present:

- Shallow or labored breathing, or very rapid breathing (if nothing precipitated it)
- Weak heartbeat
- Paralysis
- Unresponsiveness or unconsciousness
- Seizures or convulsions
- Open wounds, bleeding
- Inability to regulate temperature after 2-3 hours of home treatment (below 100 or above 104 F)
- Grey or bright pink gums
- Diarrhea
- Severely distended stomach (bloat)

Make mental note of temperature before going to vet to report reading before stress of travel

The Bunny Home Health Toolkit



- Hand sanitizer (for the human)
 - Baby wipes or tissues
 - Toe nail clippers, scissors , tweezers
 - Styptic powder to stop bleeding
 - Iodine solution or antibiotic wash to clean wounds
 - Flexible digital thermometer and Vaseline
 - Bandage material, gauze pads
 - Bottle of water (drinking water or wound care)
 - Soft blanket or towel
 - Heating pad or hot water bottle
 - Simethicone (GasX for Infants)
 - Metacam (for pain) from your veterinarian
 - Oxbow Critical Care and feeding syringe
 - Non-expired plain Pedialite, plain canned pumpkin (if not using Critical Care)
 - Children's Benadryl (oral liquid)
 - Name and contact information of your veterinarian, and nearest emergency vet center
 - Your contact information
- For more advanced kits:
- IV fluids (un-punctured bag) and needles
 - Stethoscope (preferably a good infant stethoscope, or the best you can afford)

Visit HRS at www.rabbit.org at any time for more health and care information



Other Good Reference Sources



- *House Rabbit Handbook*
By Marinell Harriman. Approx. \$11
- *When Your Rabbit Needs Special Care. Traditional and Alternative Healing Methods*
By Lucile C. Moore and Kathy Smith. Approx. \$15
- *Rabbit Health in the 21st Century, Second Edition. A Guide for Bunny Parents*
By Kathy Smith. Approx. \$18
- *Textbook of Rabbit Medicine*
By Harcourt-Brown. Approx. \$143
- www.Medirabbit.com



Presentation by
Marlene Larkin
House Rabbit Society Educator
Georgia Chapter
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