Eastern Cottontails

2014

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General Information

Eastern Cottontails

Found in Eastern USA from Virginia to California, also Mexico

Urban and rural habitats. Woodlands, pastures, near streams and ponds, fields of hay, alfalfa and gardens.

Social colonies - warrens
Prey species

Herbivore - Seen feeding at dusk & dawn, active at night, dew on grass provides water

Scent glands under chin for marking territories

Lagomorphs: 4 upper & 2 lower incisors

Teeth grow throughout life

Ears help control thermoregulatory system
General Information

Coprophyagy: (Night feces)

Ingestion of what appears to be fecal matter but is a cecotrope. Stomach can’t digest cellulose walls of plants. Large cecum (pocket off intestines) is storage organ with special enzymes.

Cecum dumps contents into intestinal track, highly concentrated vitamin B and mineral supplement, essential to its health and development.

These special feces are re-ingested.
General Information

Defense mechanisms:
• freezing in place
• biting and kicking with hind legs
• has been known to growl and scream
• babies can “pop”

Temperature is 101-103 degrees (warm to touch)

Adult weight: 1 – 5 lbs, skeletal structure 8% of body weight

Eyes set on sides of heads, see poorly.
Incredible hearing, taste and smell.
General Information

Cottontails use a shallow nest or depression lined with fur, leaves, grasses

Life span: 6 months to 2 years
Sexually mature at 4-6 months

Mating February through September with an average of 4 litters per season with 3-6 young per litter.
Gestation: 28-30 days.
General Information

Mom feeds twice a day, dawn & dusk, stays away from nest to keep predators at bay.

Babies feed on their backs

Cottontails do not do well in captivity
General Information

- Born 3 inches long and naked
- Eyes and ears closed
- Ears tiny and flat against head
- Tail very small
- Can crawl and jump
- 35-45g

Fully furred in a week, eyes and ears 7-10 days, may open one eye before other

In the wild weaned and on own at 3-5 weeks of age
Diseases

• Fibroma and Papilloma are viral, nodules and wart-like growths – no treatment for bunnies.

• Pasteurellosis is a common bacterial infection, symptoms include respiratory, skin infections, abscesses, conjunctivitus. Extremely contagious to other rabbits – treatment not entirely successful.

• Staphylococcosis is similar to Pasteurellosis, no treatment.
• Tularemia (“Rabbit Fever”), bacteria can be transmitted to humans through direct contact with broken skin, ticks, mosquito bites or inhalation of bacteria. Flu-like symptoms, vomiting and diarrhea. Treatment is Tetracylines. No treatment available for bunnies.
When to Rehab (and when not to rehab)

• Nest discovered and babies removed
  – If nest intact and babies unharmed, test for mother’s presence with sticks across the nest in # pattern
  – If # not disturbed by the next morning, bring babies in for rehab

• Destroyed nest/injured bunnies.

• Retrieved by dog
  – Release if eyes open and/or bunny not hurt
  – Rehab if eyes closed and/or bunny is hurt
When to Rehab (and when not to rehab)

- Brought in by cat – rehab and immediately start Baytril treatments – clean puncture wounds with chlorhexidine and administer antibiotic cream. Less than 50% survival rate.

- Found in the middle of the yard or other unlikely spot – treat like brought in by cat.

- Injured bunnies - broken legs and torn skin – stabilize limb and take to vet. Compound fracture (bone through skin) euthanize bunny.
Intake Procedure

Life threatening conditions go to vet, first.

Get as much information from caller as possible. If caller brings bunny to you, observe bunny in box before removing it...
• Any signs of blood?
• Bunny leaning to one side?
• Favoring a leg?
• Check for parasites, injuries, punctures.

Contact with cat...immediately administer Baytril
Intake Procedure

Cat Scratches and Bites
• Left untreated 99.9% death rate
• Euthanize if large patches of fur missing or badly injured
• Place bunny in box over heating pad set on HIGH, keep this setting for 2-3 days
• Clean scratches, punctures, missing hair patches with Betadine Solution.
• Administer Baytril within 24 hours, preferably within 12 hours

• Use *Baytril injectable* Orally. Dosage is .04cc per 100g bunny, two times a day at 12 hour intervals, for 3 days (6 doses total)

• *Bayril tablet* form – crush ¼ tablet (22.7mg), mix with 5cc distilled water. Dosage is .5cc Baytril soup per 100g bunny, two times a day at 12 hour intervals for 3 days (6 doses total)
Intake Procedure

Administer Lactated Ringers or pedialyte, ORALLY (no subcutaneous needles unless absolutely necessary), if needed for shock and/or dehydration.

Don’t use mom’s nest as it contains fleas, mites and possibly ticks

Place over heat in quiet, warm area, keep away from pets and children

Leave 15 – 30 minutes before doing full work-up

Don’t feed formula until rehydrated

Stimulate to urinate
Handling

Pick up carefully. They are fragile and they jump unexpectedly, even when eyes are still closed. Sit on floor or over a table.

Do not pick bunny up by the ears

Support hind quarters: When holding use two hands, one to support hind quarters to prevent fracture of the spine that can occur if their legs dangle or they kick with hind legs.

Kennels that open only from the front do not work well for juveniles as you cannot use two hands to corner bunny.
Handling

If Eyes Are Open
HANDLE AS LITTLE AS POSSIBLE TO REDUCE STRESS LEVEL
When stressed, bunnies release stomach acid, leading to severe enteritis.

Stress can cause diarrhea and death!!!

- Exposure to predator scents
- Exposure to pesticides from fruits or vegetables
- Exposure to chemicals (chlorine in water, perfumes, cigarette smoke, cosmetics, etc.)
- Loud noises
- Quick changes in environmental temperature or in food
- Parasites such as worms or intestinal bacteria
- Spoiled formula
Handling

Wash hands before handling to remove pet scents and creams that may be toxic.

Wash hands after handling to prevent disease transmission.

Wear latex gloves (recommended) especially if wounds are present and at all times when cleaning out boxes.
Littermates

• As a general rule, all animals are more socially adjusted if raised with one of their own kind

• Keep litters intact, if possible.

• Unweaned baby bunny can be integrated in a different litter. Keep with same age group if possible.

• Weaned bunnies are already on their own. Attempts to integrate a single weaned bunny into a strange litter will cause undue stress. A weaned bunny coming into rehab alone should remain alone.
### COTTONTAIL DEVELOPMENT CHART

<table>
<thead>
<tr>
<th>AGE</th>
<th>APPEARANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>newborn to three days</td>
<td>born furless; eyes and ears closed; darkish skin pigmentations</td>
</tr>
<tr>
<td>(approx. 35 grams)</td>
<td></td>
</tr>
<tr>
<td>3-5 days</td>
<td>skin becomes dark; hair grows rapidly; loss of umbilical cord; eyes will open soon</td>
</tr>
<tr>
<td>1 week (approx. 50-70 grams)</td>
<td>fully furred; eyes open and ears stand up</td>
</tr>
<tr>
<td>2-3 weeks (approx. 75-100 grams)</td>
<td>rapid growth</td>
</tr>
<tr>
<td>3-4 weeks (approx. 100-150 grams)</td>
<td>ears tall and pointed; full round bodies; active at night</td>
</tr>
<tr>
<td>4-6 weeks (approx. 150-200 grams)</td>
<td>close to release; very active at night, pacing and jumping. <strong>Rabbits this size would be on their own in the wild.</strong></td>
</tr>
</tbody>
</table>
Eyes Closed

Provide warm secure place resembling natural nest. Nest should be covered with cloth for added warmth.

Babies with less fur need more warmth. Check box interior for temp. If baby is cold, increase temp on heating pad.

Use a small container with secure, ventilated lid,

Can squeeze thru 1” x 1” mesh
Eyes Closed

If dehydrated start with warm electrolyte solution only, then add 25% formula, 50%, 75% until full strength formula.

Stimulate to urinate before OR after every feeding, urine is straw colored to clear (brown when it hasn’t urinated for a while due to an empty stomach)

Usually defecate on own, yellow to dark olive green flecks
Eyes Closed

Relax, the bunny will sense if you are nervous

You should be the ONLY ONE to feed or handle!!

Feed formula specifically developed for bunnies.
No cows milk, goat’s milk or home remedies.
Lactose intolerant.
Formula Preparation & Storage

Mix fresh daily, refrigerate between feeding, heat only amount used per feeding, discard unused warm formula

Use distilled water especially if your water quality is poor or if you have city water

Heat by immersing syringe in warm water or heat container in pan of hot water. Do not boil formula or heat in microwave. Test temp before feeding

Don’t use same feeding implement across litters

Sterilize feeding instruments daily
Feeding Amounts

Formula Ratio = 2 parts water to 1 part formula

Feed 1 – 5 day olds 3 times a day, 6 day olds and older 2 times a day

Weigh every 1-2 days at the same time and recalculate feeding amount. Follow a 10% bodyweight to cc ratio. E.g. 50g bodyweight = 5cc formula

Check shape of abdomen during feeding. If bunny cannot hold calculated amount of formula per feeding, add another feeding for the day with less amount per feeding. Do not overfeed

Stimulate to urinate after every meal
### APPROXIMATE FEEDING SCHEDULE

<table>
<thead>
<tr>
<th>Weight</th>
<th>Amount</th>
<th>Frequency (times per day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>30–40g</td>
<td>3-4cc</td>
<td>2-3 (possibly an additional late night feeding)</td>
</tr>
<tr>
<td>40-50g</td>
<td>4-5cc</td>
<td>2</td>
</tr>
<tr>
<td>50-60g</td>
<td>5-6cc</td>
<td>2</td>
</tr>
<tr>
<td>60-70g</td>
<td>6-7cc</td>
<td>2</td>
</tr>
<tr>
<td>70-80g</td>
<td>7-8cc</td>
<td>2</td>
</tr>
<tr>
<td>80-90g</td>
<td>8-9cc</td>
<td>1-2</td>
</tr>
<tr>
<td>90-100g</td>
<td>9-12cc</td>
<td>1</td>
</tr>
<tr>
<td>100-125g</td>
<td>10-12cc</td>
<td>1</td>
</tr>
</tbody>
</table>

This is just a guideline for healthy bunnies. Those that have just come in and are not eating well may need additional feedings during the day.
Ensure Good Intestinal Flora

Use **probiotic** daily such as Probios oral gel for ruminants or PetAg’s **Bene-bac for mammals** or **BioSponge**.

Add to formula just before feeding. Do not mix in stored formula.
Feeding Techniques

Bunnies generally don’t suckle - patience needed

Place small drops on lips

Temperature is very important, formula must be warm

Use feeding syringe alone or with Catac nipple or larger pointed version of pet nurser nipple, need fairly large hole or use eye dropper…whatever works best.
Eastern Cottontails

Two Box Procedure for Feeding Litters
Eyes Open

Eyes open around 8 days

Move to box that provides separate area for urination, food and nest

Use hay for flooring with paper towel underneath to check for urine

Provide small box/tissue box for hideaway.

Continue heat until bunny moves away from nest

Continue to stimulate after feeding until evidence of urination in box
Eyes Open

If the bunny comes in with eyes open – do not attempt to “tame” it.

Handle it only when necessary and as little as possible. The less they see and hear you - the better it will be for them.

During feeding cover their eyes with a towel or your hand. They will eat better if they can’t see you.
Weaning

Don’t wean too quickly

**Weight watching is critical!**

Once eyes are fully opened, don’t increase daily formula amount

After two successive daily weight gains begin decreasing the amount of formula and monitor weight

Small dish of formula inside container to introduce lapping.

Introduce greens (clover, chickweed and dandelions), baby mixed greens, gradually to prevent bunny bloat. 1-2 leaves.
Juvenile Food

Timothy Hay

Provide apple slices (minus the peel), grated carrots and carrot tops, green beans, corn and wild strawberries (no iceberg lettuce, broccoli or cabbage)

Add bowl of water to middle of box
Babies Arriving With Eyes Open

Are they weaned? Don’t judge by weight

“If you have to chase it to catch it, it doesn’t need your help”

Try stimulating bunny
  – Brown urine a definite sign bunny is not weaned.
  – If bunny is dehydrated, you will probably not get much urine but if bunny is not dehydrated and you get a lot of urine, bunny is probably not weaned

Provide heat source
Lay out adult food, especially apple slices, to see if eaten by the next morning

Check weight the next day to be sure bunny has not lost weight
Release

• 125g – 200g weight, use behavior and developmental status as guide

• Fully weaned. Eating adult food and lots of clover – at least two handfuls twice a day for each bunny

• All injuries are healed

• Acclimated to outdoors:
  – dirt & natural materials on bottom of cage
  – temperature matching outdoor conditions
  – hearing natural sounds
  – open window in rehab room
Release

Release spot chosen – lots of cover, easy access to food, not over-populated

Good weather for the next day or so

Release in evening

Do not winter over – too high strung
Release Sites

Eastern Cottontails