Chronic, Intermittent Diarrhea in Rabbits
(Cecal Dysbiosis)

Basics

OVERVIEW

- In rabbits, the most common cause of what appears as chronic, intermittent diarrhea is cecal dysbiosis. This is characterized by the passage of soft, pasty, odiferous stool, intermixed with the passage of normal, firm fecal pellets.
- Cecal dysbiosis is a change in the bacterial population of the cecum from beneficial to harmful. Bacterial populations may be altered by antibiotic usage, stress, or more commonly, poor nutrition. Rabbits are extremely sensitive to alterations in diet. Beneficial intestinal bacteria are dependent on the ingestion of large amounts of roughage and long-stemmed hay. Diets that contain inadequate amounts of coarse fiber (such as the feeding of only commercial pelleted food without hay or grasses) cause death of beneficial bacteria and overgrowth of harmful bacteria.
- Several times a day, all normal rabbits eat the soft feces that are produced in the cecum, called cecotrophs. This is normal and essential to allow the beneficial bacteria to survive. Most owners do not notice the rabbit eating cecotrophs, because they are consumed directly from the rectum and swallowed whole, very quickly.
- Rabbits that do not eat their cecotrophs usually have soft feces (cecotrophs) adhered to the fur around their hind end, which is readily mistaken for diarrhea. Rabbits with cecal dysbiosis do not eat their cecotrophs because the cecotrophs have an abnormal consistency, odor, or shape; other causes include conditions that make it difficult for the rabbit to reach the back half of the body, such as obesity or pain.

SIGNALMENT

No specific age or gender predilection

SIGNS

- Finding soft, pasty stools that stick together; these are often found stuck to the fur around the rabbit’s hindquarters. These stools are usually interspersed with normal, dry fecal pellets.
- The frequency of abnormal stools may vary from several times a day to weekly.
- There has often been a recent change in the diet or the rabbit is fed a diet containing inadequate amounts of long-stemmed hay or grasses and excessive simple carbohydrates (e.g., feeding only pellets, excessive fruits, sugary vegetables, sweets, or grain products). There may have been recent antibiotic usage or a stressful event.
• The skin around the rabbit’s hindquarters may appear raw, sore, or missing fur.
• The rabbit usually appears otherwise healthy, unless there is some other, underlying disease contributing to or occurring coincidentally with cecal dysbiosis.

CAUSES
• Dietary causes—The most common cause of cecal dysbiosis (especially in patients that appear otherwise normal) is inappropriate diet. Diets that are high in simple carbohydrates (yogurt drops or other sweets, commercial pellets, sugary fruits and vegetables, bread and grain products) and low in coarse, indigestible fiber such as long-stemmed hay cause disruption of normal cecal bacteria and cecal function.
• Lack of exercise (due to cage confinement, obesity, or neurologic, muscular, or skeletal disorders) is often a significant contributing factor to the development of cecal dysbiosis.
• A recent stress, illness, or painful event can trigger gastrointestinal hypomotility/stasis and contribute to cecal dysbiosis.
• Eating abnormal substances that accumulate in the cecum, such as cat litter or straw baskets, can cause cecal impaction or dysbiosis.
• Drugs and toxins—especially antibiotics or lead
• Metabolic disorders—liver or kidney disease

RISK FACTORS
• Diets with inadequate indigestible coarse fiber content and high simple carbohydrate content—most prominent risk factor
• Inactivity due to pain, obesity, cage confinement
• Stress
• Dietary changes
• Unsupervised chewing

TREATMENT
APPROPRIATE HEALTH CARE
• Treat the underlying cause—symptomatic treatment rarely resolves long-term (chronic) diarrhea
• Most rabbits can be treated on an outpatient basis with dietary modification alone.
• Keep the hind end clean, dry, and free of feces until soft stools resolve to prevent skin infections.
• During the time in which soft stools are adhered to the rabbit’s hindquarters, it is important to keep your pet indoors and away from flies. Flies are very attracted to the stool-covered skin and may lay eggs in the feces, which hatch into maggots that feed on the rabbit’s flesh (“fly strike”).

DIET
• For rabbits with intermittent soft stool and no other clinical signs, dietary modification is the mainstay of treatment. It may take days to weeks for these dietary recommendations to change the cecal bacteria. Allow sufficient time on strict dietary modification for the diarrhea to resolve. It is important to not give up if a change is not noted immediately; sometimes soft stools may worsen slightly before improving. Strict dietary compliance is essential to successful treatment.
• First eliminate all fruits, vegetables, grain-based treats (oats, crackers, breads, cereal), and sugary treats (yogurt drops, candy).
• Offer only high-quality, fresh, long-stemmed hay (grass or timothy preferred; commercially available hay cubes are not sufficient) until soft stool production is no longer noted. This may require weeks of diet change.
• Gradually return pellets to the diets. Offer only a limited amount (1/4 cup pellets per 5 lb body weight) of good-quality, high-fiber, timothy-based pellets.
• If feces remain normal after introducing pellets, gradually add a selection of fresh, moistened greens such as cilantro, romaine lettuce, parsley, carrot tops, dandelion greens, spinach, collard greens, etc., eventually feeding these free choice every day.
• A few rabbits cannot tolerate fresh leafy greens or pelleted foods in the diet. If intermittent soft stool is still seen and the rabbit is otherwise normal, feed a diet consisting of good-quality hay and grasses alone.
MEDICATIONS
Medications presented in this section are intended to provide general information about possible treatment. The treatment for a particular condition may evolve as medical advances are made; therefore, the medications should not be considered all-inclusive.

• In most cases, diet change alone will be successful; no medication is needed.
• Antibiotics are usually not used, and can often worsen intermittent soft stools. The exception is an overgrowth of clostridial bacteria, which is usually treated with metronidazole.
• Medications to treat the underlying cause are indicated, for example, pain or anti-inflammatory medications to treat rabbits with painful conditions that prevent them from being able to reach their hindquarters to consume cecotrophs.

FOLLOW-UP
PATIENT MONITORING
• It often takes days to weeks of dietary modification for resolution of diarrhea. It is very important to be diligent in feeding only the recommended diet.
• Monitor fecal volume and character, appetite, attitude, and body weight.
• If diarrhea does not resolve or other symptoms develop, seek veterinary attention to reevaluate the diagnosis.

PREVENTION/AVOIDANCE
• Depends on underlying cause

POSSIBLE COMPLICATIONS
• Skin infections around the hindquarters
• Fly strike

EXPECTED COURSE AND PROGNOSIS
• Depend on underlying cause
• Resolution of diarrhea usually is gradual after dietary modification; if it does not resolve with treatment, consider reevaluating the diagnosis.

KEY POINTS
• Most rabbits that are otherwise healthy can be readily treated with dietary change, but it is important to strictly adhere to the diet.
• Some rabbits will develop intermittent stool anytime greens or new foods are added to the diet.
• Rabbits that are debilitated may not be able to consume their cecotrophs. It is very important to keep the hind end clean to prevent skin infections.