



# Introduction to Ferret Care

Melissa Magnuson, DVM • Alexandra Kilgore, DVM

Ferrets are wonderful pets. They are typically gentle, playful, and very curious. That curiosity also means they can get into trouble quickly when left unattended. Ferrets have additional care needs compared with many other small pets, and preventive care is essential. This guide outlines basic husbandry and common medical concerns, consistent with AAHA principles of safety, early detection, and preventive wellness.

## Housing and Home Setup

Ferrets are extremely curious and mischievous. They love to chew and are very good at it. Ferrets should be kept in an appropriate cage when they cannot be supervised.



An appropriate ferret cage is large, has multiple levels, and has narrow cage bars to prevent escape. The cage should have a sturdy top and a secure latching system on the doors. The Midwest Ferret Nation cage is a good option.

A litter box should be provided in the enclosure and in rooms that ferrets will spend time. Since ferrets prefer to eliminate in corners, litter boxes should be placed in the corners of rooms they can access. Acceptable substrates include paper products such as recycled paper pellets. Clumping and clay litters may stick to the ferret's nose and cause respiratory distress. Cedar and pine shavings should not be used due to resins that may irritate the respiratory tract.

There are many toys suitable for ferrets made of cloth, hard rubber, or plastic. Avoid toys with small parts that could be swallowed. Ferrets will play with, and attempt to ingest, many unsafe objects. Keep items such as earplugs, pencil erasers, rubber bands, foam pieces, and small children's toys out of reach.

Rooms where ferrets are allowed to roam must be ferret-proofed. Hide electrical cords, block access to upholstered furniture if chewing is a concern, and confirm there are no escape routes such as broken screens or poorly closing doors. Reclining chairs should not be used when ferrets are present, as ferrets may climb into the mechanism and be seriously injured.

## Nutrition and Feeding

Ferrets have a very high metabolic rate and should have food and fresh water available at all times, as they require multiple meals throughout the day. Water bottles or water bowls secured to the cage can

be used. As ferrets age, bowls are often preferred because they are easier to drink from and help maintain hydration.

Ferrets are true carnivores and require a diet high in animal-based protein and fat with minimal carbohydrates. Grains and starches should be avoided, as high-carbohydrate diets are associated with increased disease risk.

An ideal diet for a ferret is whole prey, such as a mouse, but many owners are uncomfortable with this option. High-quality raw or freeze-dried raw diets such as [Primal Raw or Primal Dehydrated cat food](#) are good alternatives. Meat-based varieties are preferred over fish-based formulas.

For owners who do not wish to feed whole prey diets, there are grain-free kibble diets formulated for ferrets. We highly recommend [Wysong ferret diets](#), which are freeze-dried and grain-free. Freeze drying preserves many nutritional qualities of raw diets. Alternative options include [Pretty Pet's Natural Gold](#).

High-quality grain-free wet cat foods are also acceptable options. Examples include [Nature's Variety Instinct](#), [Wellness Core](#), [Blue Wilderness](#), and [Petcurean NOW](#). These diets are typically high in animal protein and moisture, which may be beneficial for hydration.

The next best option is a high-quality grain-free dry cat or kitten food. Some higher-protein brands include [Petcurean NOW](#) and [Nature's Variety Instinct](#). There has been some controversy regarding diets that include pea flour and duck meat and their potential role in bladder stone formation. It is believed that some ferrets may be genetically predisposed to issues with cysteine metabolism, and in those individuals, high-cysteine diets should be avoided.

Diet changes must be made gradually. New foods should be introduced over one to two weeks by slowly increasing the proportion of the new diet each day. If your ferret develops diarrhea, vomiting, or other signs of gastrointestinal upset, please contact the hospital.

Treats should be strictly meat-based, such as dehydrated chicken, beef, venison, or rabbit. Always read ingredient labels to ensure treats contain no grains, sugars, or fillers. Small amounts of cooked plain chicken or turkey are also acceptable.

## Bathing

Ferrets can be bathed and may tolerate bathing well if introduced early. Use a mild, soap-free pet shampoo. Avoid getting shampoo or water in the eyes and ears. Bathe in a shallow sink with warm water, rinse thoroughly, and prevent chilling. Towel drying is usually sufficient, and many ferrets will complete drying themselves.

## Vaccines

Ferrets should be vaccinated for canine distemper. Canine distemper is a virus that can cause serious, even deadly disease in ferrets. A vaccine manufactured specifically for ferrets must be used.

Juvenile ferrets should receive a series of two distemper vaccinations three to four weeks apart. Adult ferrets should receive annual boosters thereafter.

Even ferrets that never go outside should be vaccinated. Distemper can be brought into the home on clothing, shoes, or other items after contact with infected animals or contaminated environments.

Ferrets should also be vaccinated annually for rabies. Rabies is a fatal disease in all mammals. Vaccination protects your ferret in the event of exposure and helps prevent mandatory quarantine if a bite occurs. Rabies vaccination is required by law in many regions.

Some ferrets may have allergic reactions to vaccines. We recommend close monitoring for thirty minutes after vaccination. If your ferret has experienced a severe reaction, we will discuss appropriate options for future vaccination protocols.

## **Elective Surgeries**

Most ferrets from pet stores are de-scented and spayed or neutered at a very young age. While these procedures can reduce odor, they do not completely eliminate the natural musky scent.

If a ferret has not been surgically altered, it is strongly recommended to do so. Neutered males are typically less aggressive. Unspayed females may remain in heat for prolonged periods and can develop life-threatening anemia due to estrogen toxicity.

Early spay and neuter has been associated with increased risk of adrenal disease later in life. When possible and under veterinary guidance, some owners choose to delay surgery until after puberty, around six to nine months of age.

## **Common Medical Problems**

### **Heartworm Disease**

Heartworm disease is caused by a parasite spread by mosquitoes. Although ferrets are less commonly infected than dogs, infection can occur and may be serious. Monthly heartworm prevention is recommended. Revolution is a topical option that also helps control fleas, mites, and certain intestinal parasites. If Revolution is not tolerated, a chewable heartworm prevention labeled for cats may be used, provided your ferret will reliably eat it.

### **Dental Disease**

Ferrets benefit from dental care similar to dogs and cats. Human toothpaste is not safe. Use an enzymatic pet toothpaste such as CET. Introduce gradually as a treat, then progress to wiping the teeth and eventually brushing. Many ferrets require professional dental cleanings over time.

### **Hairballs**

Hairballs can be serious and potentially life-threatening in ferrets. Daily brushing, especially during shedding seasons, and proper nutrition help reduce risk.

### **Human Colds and Flu**

Ferrets are susceptible to human respiratory viruses. Avoid close contact when ill. Monitor for sneezing, runny eyes or nose, diarrhea, lethargy, or decreased appetite and schedule an appointment if signs develop.

### **Insulinoma**

Insulinoma is a common pancreatic tumor that causes low blood sugar due to excess insulin

production. High-carbohydrate diets increase risk. Feeding a high-protein, low-carbohydrate diet helps reduce incidence. Weakness, collapse, or hind-end difficulty warrant immediate evaluation.

### **Adrenal Disease**

Adrenal disease is common in middle-aged ferrets. Signs include increased thirst and urination, symmetric hair loss, itchy skin, enlarged vulva in females, and straining to urinate in males. Treatment options include medical and surgical management.

## **Signs of Disease**

Contact the hospital if you observe:

- Sneezing or runny eyes or nose
- Decreased appetite or activity
- Labored breathing
- Bloody or black stools
- Decreased stool production
- Straining to urinate or defecate
- Fever
- Poor coordination
- Itchy skin or ears



Additional warning signs include hair loss, lethargy, collapse, swollen vulva in females, or difficulty urinating in males. Early evaluation improves treatment success.

## **Preventive Care**

Ferrets are prone to several medical conditions, making routine veterinary care essential. A yearly physical exam is recommended for all ferrets. Once ferrets reach three years of age, radiographs and blood work should be performed every six to twelve months to detect early disease.

Fecal exams are especially important in young ferrets and those with exposure to other ferrets. Stool testing screens for intestinal parasites that may be contagious.

### **Preventing Adrenal Disease With Annual January Exams**

Recent research indicates that annual treatments can significantly reduce the risk of adrenal disease. We strongly recommend yearly examinations every January to administer prophylactic treatments and assess overall health.

Deslorelin or Lupron implants reduce hormone stimulation of the adrenal glands. These implants are typically administered every nine to eighteen months depending on the ferret's clinical signs and response. This is a brief procedure that requires sedation.

## **Human Bites**

Ferret bites are often discussed but not proven to occur more frequently than bites from other pets. Children should never interact with ferrets without supervision to ensure safety for both the child and the ferret.



# Vaccines and Vaccine Reactions in Ferrets

Alexandra Kilgore, DVM

## Why Vaccines Matter in Ferrets

Vaccination is a critical part of preventive care for ferrets. Two viral diseases—canine distemper and rabies—are both fatal, and one of them poses a direct risk to people. Because ferrets are more prone to vaccine reactions than dogs and cats, vaccines must be given thoughtfully, safely, and under veterinary supervision.

### Canine Distemper

Canine distemper is a highly contagious and nearly 100 percent fatal disease in ferrets.

### How Distemper Spreads

Distemper can be transmitted by:

- Direct contact with an infected animal
- Indirect contact through contaminated hands, shoes, clothing, bowls, carriers, or surfaces

Even indoor ferrets are at risk. Distemper remains common in wildlife, and a nationwide outbreak affecting ferrets occurred in 2022. For these reasons, vaccination against distemper is strongly recommended for all ferrets.

### Distemper vaccination protocols

For healthy kits 14 weeks of age or younger  
From mothers with unknown, incomplete, or outdated vaccination history, or for kits with unknown or no vaccination history:

- A series of three vaccines, given three weeks apart
- Final booster at 14 weeks of age
- Then vaccinate annually on the anniversary of the last booster

For healthy ferrets over 14 weeks of age  
With unknown, incomplete, outdated, or no vaccination history:

- A series of two vaccines, given three weeks apart
- Then vaccinate annually on the anniversary of the last booster

Do not vaccinate pregnant jills.

### Rabies

Rabies is a viral disease that affects all mammals and is 100 percent fatal. It is also zoonotic, meaning it can be transmitted to people.



Rabies vaccination is required by law. Routine rabies vaccination in pets—including ferrets—protects both animals and humans from this deadly disease.

### **Rabies vaccination guidelines**

- First rabies vaccine at 12 weeks of age
- Booster annually for life
- All healthy ferrets are required to receive yearly rabies vaccination

## **Vaccine Reactions in Ferrets**

Ferrets experience vaccine reactions more commonly than dogs and cats. Up to 6 percent of ferrets may have an adverse reaction.

### **How we reduce risk**

To minimize the chance of reactions:

- Only one vaccine is given at a time
- Vaccines are spaced at least two weeks apart
- Owners should plan to spend up to one hour for vaccination appointments
- All ferrets are observed in the hospital for at least 30 minutes after vaccination so immediate treatment can be provided if needed

In some cases:

- A pre-vaccination injection of antihistamine and steroid may be given
- Ferrets may be admitted for extended observation after vaccination

### **Signs of a vaccine reaction**

Most reactions occur quickly after vaccination. Signs may include:

- Redness or blushing of the ears
- Restlessness
- Difficulty breathing or respiratory distress
- Vomiting (sometimes with blood)
- Diarrhea (often with mucus or blood)
- Weakness or collapse

If a reaction occurs while your ferret is in the hospital, prompt treatment can be provided immediately.



## **Preventive Care and First-time Ferret Visits**

If your ferret has never been examined by a veterinarian, it is important to understand that they are not fully protected against these deadly diseases.

- Ferret kits are often given one distemper vaccine by breeders, but a single dose is not sufficient to provide protection
- Ferrets are typically sold before they are old enough to receive a rabies vaccine



If your ferret has not yet seen a veterinarian, we strongly recommend scheduling a wellness appointment. During this visit, we will:

- Perform a complete physical examination
- Review vaccine history
- Determine which vaccines are appropriate and when to administer them safely

### **Questions or concerns?**

Vaccinating ferrets requires careful planning and monitoring.

If you have questions about vaccines, vaccine reactions, or scheduling preventive care, please contact the hospital. We are committed to keeping your ferret safe, protected, and healthy.





# Ferret Insulinoma

Alexandra Kilgore, DVM

## What is insulinoma?

Insulinoma is one of the most common diseases of middle-aged to older ferrets. It is caused by an abnormal growth (tumor) of the pancreas, specifically the insulin-producing beta cells.

These tumors release excess insulin, which causes the ferret's blood glucose (blood sugar) levels to drop too low. Blood sugar is essential for normal brain function and muscle activity. When levels fall, serious and sometimes life-threatening signs can occur.

## Clinical signs

Signs of insulinoma are caused by low blood sugar (hypoglycemia) and may include:

- Lethargy or weakness
- A dazed or glassy-eyed appearance
- Rear leg weakness or wobbliness
- Collapse
- Seizures

Low blood sugar often causes nausea. A nauseous ferret may:

- Drool excessively
- Paw at the mouth
- Appear uncomfortable or restless

Signs may be intermittent at first and become more frequent or severe over time.

## Diagnosis

Insulinoma is so common in older ferrets that persistently low fasting blood glucose is highly suggestive of disease.

Diagnostic tools may include:

- Fasting blood glucose testing
- Blood insulin levels (used in select cases)
- Abdominal ultrasound to identify pancreatic nodules

A definitive diagnosis is obtained through surgical biopsy of the pancreas.

## Treatment options

There is no permanent cure for insulinoma. Treatment is aimed at controlling low blood sugar and maintaining quality of life.



## **Surgical treatment**

Surgery involves removing as much of the pancreatic tumor tissue as possible.

- Surgery can significantly reduce clinical signs
- It cannot remove all tumor cells
- Signs of insulinoma will eventually recur

Recurrence may occur within weeks to months, and in some cases years. Most ferrets will eventually require medical management even after surgery.

## **Medical management**

Medical therapy is commonly used either:

- After surgery when signs recur, or
- As primary treatment when surgery is not an option

The most commonly used medications include:

Prednisolone

- Helps increase blood glucose levels
- Dose typically must be increased gradually as the disease progresses

Diazoxide

- Added when prednisone alone is no longer effective
- Helps reduce insulin release

For a period of time, prednisone and diazoxide together can effectively control hypoglycemia. Eventually, however, these medications may no longer be sufficient. At this time, there is no consistently reliable third medication available.

## **Prognosis**

Insulinoma is a progressive disease. While surgery and medications can control signs for months to sometimes years, there is no known permanent cure. With appropriate treatment and monitoring, many ferrets maintain a good quality of life.

## **Home care and monitoring**

Medication

- Give all medications exactly as prescribed
- Prednisone often increases appetite and water intake
- Ensure fresh water and clean litter boxes are always available

Diet

- Provide high-quality, high-protein ferret or cat food at all times
- Avoid semi-moist foods, which are high in sugar
- Avoid sweet treats and snacks

Activity and stress

Situations that use blood sugar can trigger hypoglycemia:

- Excitement
- Exercise
- Stress

To reduce risk:

- Limit rough play
- Encourage eating after exercise or stressful events

If signs of hypoglycemia occur at home

- Encourage your ferret to eat immediately

If your ferret is:

- Severely weak
- Collapsing
- Having seizures
- Unable to eat

Rub a small amount of sweet syrup (such as Karo syrup®) onto the gums.

- Use a cotton-tipped applicator to avoid being bitten
- Once alert, feed a high-protein meal (such as carnivore care or the regular diet)
- Contact a small mammal veterinarian immediately if signs persist or if collapse or seizures occur

Tracking symptoms: Keeping a log of hypoglycemic episodes can be very helpful.

Record:

- Date and time
- Signs observed
- Possible triggers
- Response to food or medication

This information helps your veterinarian adjust treatment as the disease progresses.

## When to call us

Contact us immediately if your ferret experiences:

- Collapse
- Seizures
- Persistent weakness
- Worsening or more frequent hypoglycemic episodes

Early intervention improves comfort and safety.

If you have questions about insulinoma or managing your ferret at home, please contact our hospital. We are here to help you support your ferret through every stage of this disease.

## Resources

Lafeber - Insulinoma in Ferrets:

<https://lafeber.com/vet/wp-content/uploads/2024/08/Insulinoma-in-Ferrets-Handout-AEMV-081824.pdf>



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# Heartworm Disease in Ferrets

Alexandra Kilgore, DVM

## What is heartworm disease?

Heartworm disease is a serious and potentially fatal parasitic infection transmitted by mosquitoes. It affects dogs, cats, ferrets, and wildlife.

Although less common in ferrets than in dogs, heartworm disease is especially dangerous in ferrets. Even a very small number of worms—as few as one to two adult heartworms—can cause severe heart disease and death.

Heartworm disease may occur at any age and is more common in tropical and semi-tropical regions, but ferrets in other areas are still at risk. Importantly, indoor-only ferrets are not protected, as mosquitoes can enter homes.



## Why Heartworm Disease is so Dangerous in Ferrets

Ferrets have small hearts and blood vessels. Because of this:

- A low worm burden can cause life-threatening disease
- Heart failure can develop rapidly
- Treatment options are limited and risky

For these reasons, prevention is far safer than treatment.

## Clinical Signs

Clinical signs vary widely and may range from subtle to severe. Some ferrets show no obvious signs until disease has advanced.

Possible signs include:

- Weakness
- Lethargy
- Loss of appetite
- Weight loss
- Muscle wasting
- Coughing
- Shortness of breath
- Rapid or labored breathing
- Dark-colored urine

In advanced cases, ferrets may develop congestive heart failure with fluid accumulation in the chest (pleural effusion).

Veterinary exam findings may include:

- Increased heart rate
- Pale gums and mucous membranes
- Heart murmur
- Muffled heart sounds

## Diagnosis

Diagnosing heartworm disease in ferrets can be challenging.

Diagnostic tools may include:

- Heartworm antigen blood test
  - Positive in approximately 60–80 percent of cases
  - False negatives can occur
- Chest radiographs (X-rays)
  - May show heart enlargement
  - May reveal fluid in the chest cavity
- Cardiac ultrasound (echocardiogram)
  - Recommended to assess heart function and heart failure
  - Adult worms may sometimes be visualized in the heart or pulmonary arteries

Because no single test is perfect, diagnosis often relies on multiple tests combined with clinical signs.

## Treatment

Treatment decisions depend largely on whether the ferret is in heart failure at the time of diagnosis.

## Stabilization

If a ferret is in severe heart failure:

- Hospitalization is required
- Medications are used to stabilize heart and lung function
- Fluid may need to be removed from the chest cavity

## Heartworm Treatment

Once stabilized, treatment to eliminate adult heartworms may be attempted. Options include:

- Medical treatment
- Surgical removal of worms (in select cases)

Both approaches are very challenging in ferrets.

Ferrets treated medically are at risk for serious complications from dying worms, including embolism, for up to three months after treatment.

- Strict activity restriction is required for 4 to 6 weeks after treatment
- Close monitoring is essential

Even with treatment, symptomatic ferrets have only a 40–60 percent chance of survival.

## Prevention

Although heartworm disease is relatively uncommon in ferrets, it is extremely difficult to treat successfully. Prevention is therefore strongly recommended.

## Heartworm Prevention

We recommend monthly heartworm prevention for all ferrets living in endemic areas.

Preventive medications may include:

- Revolution
- Ivermectin

These medications are prescription only. Your veterinarian will advise you on the most appropriate option and dosing during your ferret's yearly preventive exam.

## Environmental Control

Reducing mosquito exposure can also help:

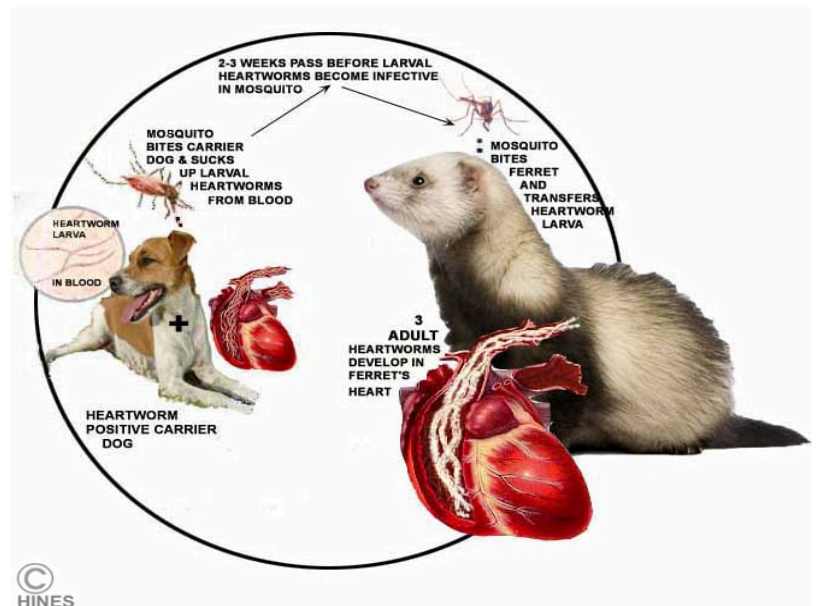
- Use window screens
- Limit standing water near the home
- Keep ferrets indoors during peak mosquito activity when possible

## Key Takeaways

- Even one or two heartworms can be fatal in ferrets
- Indoor-only ferrets are still at risk
- Diagnosis and treatment are difficult and risky
- Monthly prevention is safe, effective, and strongly recommended

## Questions or Concerns?

If you have questions about heartworm disease or preventive care for your ferret, please contact the hospital. Preventive care can save your ferret's life.





# Ferret Adrenal Disease

Alexandra Kilgore, DVM

## What is adrenal disease

Ferret adrenal disease, also called hyperadrenocorticism, is one of the most common medical conditions affecting pet ferrets. In the United States, up to 70 percent of ferrets develop adrenal disease during their lifetime.

The adrenal glands are two small organs located near the kidneys. They normally produce hormones that regulate many body functions. In ferrets with adrenal disease, one or both adrenal glands become enlarged due to:

- Hyperplasia (overgrowth of the gland)
- A benign tumor
- A malignant tumor

Unlike Cushing's disease in dogs, adrenal disease in ferrets is caused by excess sex hormones (androgens) rather than excess natural steroids. The disease is most often diagnosed in ferrets three years of age or older, but it can occur as early as two years of age.



## Clinical signs

Signs of adrenal disease are related to elevated hormone levels and may include:

- Progressive hair loss, often starting at the tail or hips
- Itching (pruritus)
- Enlarged vulva in females
- Enlarged prostate in males, leading to straining or difficulty urinating
- Increased sexual behaviors or aggression
- Lethargy
- Weight loss
- Hind limb weakness

If left untreated, some of these signs can become life threatening, especially urinary obstruction in male ferrets.

## Diagnosis

Diagnosis is based on a combination of:

- A thorough medical history

- Complete physical examination
- Basic blood work
- Hormone testing (endocrine panel submitted to the University of Tennessee)
- Imaging such as X-rays, ultrasound, or CT scan

Not all tests are required for every ferret. Your veterinarian will recommend diagnostics based on your ferret's age, symptoms, and overall health.

## Treatment options

The best treatment for adrenal disease depends on several factors, including your ferret's age, overall health, and whether one or both adrenal glands are affected.

### Surgical treatment

Surgery involves removing the affected adrenal gland.

- If only one gland is affected, surgery can be curative
- The left adrenal gland is generally easier to remove
- The right adrenal gland is more difficult due to its close association with the caudal vena cava

In some ferrets, both adrenal glands are affected. Because adrenal glands play an important role in normal body function, removing both glands completely is not possible and can lead to serious complications.

### Medical treatment

Medical management is now the most common approach to treating adrenal disease due to lower risk and cost compared to surgery. Medical therapy controls hormone production but does not remove adrenal tumors.

Medical treatment may include one or more of the following:

#### Deslorelin

Deslorelin is a hormone analog that slowly suppresses adrenal stimulation and hormone release. It is administered as a small implant injected under the skin.

- Symptoms typically improve within two to six weeks
- Effects last eight to twenty months
- Often recommended yearly for symptomatic ferrets
- Use as a preventive treatment in young ferrets is currently being studied

#### Leuprolide

Leuprolide works similarly to deslorelin but requires:

- Monthly injections, or
- Quarterly injections, depending on formulation

#### Melatonin

Melatonin supplementation may help counteract the effects of artificial lighting, especially during long summer days.

- A long-acting implant can be placed under the skin every six months

### Prostate-directed medications (males)

For ferrets with enlarged prostates causing discomfort or urinary issues:

- Flutamide
- Bicalutamide
- Finasteride

These medications can help reduce prostate size and improve quality of life.

Anastrozole

Anastrozole may be used to reduce excess estrogen levels associated with adrenal disease.

## Preventing adrenal disease with annual exams

Recent research suggests that annual preventive treatments can significantly reduce the risk of adrenal disease in ferrets.

We strongly recommend:

- Annual ferret examinations every January
- Preventive hormone therapy when appropriate. Standard Process makes supplements like Canine Adrenal Support, Symplex M and Symplex F, Utrophine PMG and Orchic PMG which may be beneficial when started early.
- Early detection of subtle changes before serious complications develop

Regular exams allow us to keep your ferret healthy, comfortable, and thriving for as long as possible.

## When to call us

Contact us promptly if your ferret shows:

- Hair loss
- Changes in urination
- Behavioral changes
- Lethargy or weakness
- Weight loss

Early intervention leads to better outcomes and fewer complications.

If you have questions or concerns about adrenal disease or preventive care for your ferret, please contact the hospital. We are here to help guide you through every stage of your ferret's life.

