

Ferrets make up only a small proportion of the questions you will be asked on board exams. Because there are a handful of unique and common diseases in ferrets, most of those questions will come from these. The goal of this PowerPage is to review some general species information and the common infectious and metabolic diseases of ferrets. The common neoplastic diseases of ferrets are also important and are reviewed on the Ferret Neoplasia PowerPage.

## General Information About Ferrets

- Life span 5-11 years
- Males are called 'hobs'; females are called 'jills', young are called 'kits'.
- Illegal as pets in California, Hawaii and in specific cities Dallas, New York City.
- Reproductively mature by 6-8 months of age
- Seasonally polyestrous breeders, breeding season in US from March - August.
- Female is an **induced ovulatory**:
  - a. If not bred, the jill may remain in estrus for long periods of time causing **estrogen toxicity** (see below).
  - b. Females should be spayed if not intended for breeding
- Gestation 41-42 days
- Splenomegaly is a common clinical finding on physical exam in the mature ferret; may be significant or a benign finding in many animals.
- Ferrets have a large pancreas compared to other carnivores.

## Viral Diseases of Ferrets

- Ferrets are **NOT** susceptible to feline panleukopenia, feline rhinotracheitis, mink virus enteritis, canine hepatitis or canine parvovirus. These make good distracter choices on multiple choice tests.

## Ferret Distemper (Caused by Canine Distemper Virus-CDV)

- Ferrets are extremely sensitive to CDV, virtually 100% fatal
- Common symptoms include:
  - a. Anorexia
  - b. **Mucopurulent ocular and nasal discharge**

- c. **Hyperkeratotic footpads** and skin rash
  - d. Death can occur 14 days after exposure to ferret CDV strains and 21 to 35 days after exposure to canine CDV strains.
- Ferrets that survive the catarrhal phase may die during a CNS phase of distemper:
  - a. Hyperexcitability, muscular tremor, convulsions
  - b. Excess salivation
  - c. Coma
- Vaccine available and labeled for use in ferrets: PUREVAX® FERRET DISTEMPER by Merial.
- Passive immunity by maternal antibodies in the kit may prevent response to the first vaccine in the series.
- Ferrets should receive only monovalent, or single agent, vaccines; **do not give regular canine vaccine!**

## Aleutian Disease Virus (ADV) or Aleutian Mink Disease

- Caused by a parvovirus that infects mink, ferrets, raccoons, skunks, and possibly other Mustelidae.
- Classic symptoms:
  - a. **Chronic progressive wasting disease**
  - b. Rear limb paralysis, muscle wasting
  - c. Tremors
  - d. Urinary incontinence
  - e. Enlarged spleen, pallor, tarry feces
- No ADV vaccine available; other parvovirus vaccines do not cross-protect.

## Human Influenza Virus

- Very susceptible to several strains of human influenza (orthomyxovirus).
- Transmission is by respiratory discharge from human to ferret.
- Symptoms include lethargy, fever, anorexia and oculonasal discharge; non-fatal unless in compromised neonates.
- Treatment is symptomatic.
- Ferrets are good experimental animal models for human influenza studies.

## Rabies

- Susceptible, causing classic disease signs (See Rabies PowerPage).
- Several vaccines available and labeled for use in ferrets including IMRAB3® by Merial.
- Concern for human safety from pet ferrets that are not vaccinated is a major reason for preventing ferrets as pets in many cities and states.

## Epizootic Catarrhal Enteritis

- New, highly contagious disease of ferrets caused by a Coronavirus.
- ECE is most commonly diagnosed following new introduction of a ferret into a household or rescue facility.
- Also known as the '**green slime disease**' or 'green slime diarrhea'.
- Symptoms include dark green slimy diarrhea, loss of appetite, lethargy.
- Vaccine is not available.

## Metabolic Diseases of Ferrets

### Estrogen Toxicity from Prolonged Estrus

- Estrogen-induced anemia, bone marrow depression, bleeding disorders, pancytopenia.
- Seen in approximately 50% of unspayed females if not bred during estrus.
- Not as common now, since most pet ferrets are sterilized at 6 wks.
- Symptoms include:
  - a. Pale mucous membranes, petechiae/ecchymoses of skin.
  - b. Posterior paresis.
  - c. Inappetance, lethargy.
  - d. Melena.
  - e. Alopecia.
  - f. Swollen vulva.
- Diagnosis from abnormal PCV, CBC, platelet count.
- Prognosis varies according to PCV: grave if PCV <15%, guarded if 16-24%.

## Estrogen Toxicity from Prolonged Estrus (Cont.)

- Treatment options:
  - a. Induce ovulation with human chorionic gonadotropin (HCG); this is safest treatment modality; may need repeat injection in 7-14 days.
  - b. Manual stimulation of cervix not reliable.
  - c. Ovariohysterectomy, if CBC is normal.
  - d. Breed with vasectomized male.
  - e. Blood transfusion(s), iron injections, androgens, steroids, antibiotics.

## Hyperadrenocorticism and Hyperinsulinism

- Reviewed in the *Ferret Neoplasia* PowerPage.

## Miscellaneous Diseases of Ferrets

These diseases are not unique to ferrets and present similarly to other species. You should be aware that they can occur.

- GI and External Parasites
  - a. Giardia, coccidia, toxocara, sarcoptes scabiei, fleas.
- Heartworm; control with monthly ivermectin in endemic areas.
- Botulism, especially *Clostridium botulinum*, Type C.
- Dermatologic diseases.
  - a. Scabies, distemper, alopecia from hyperadrenocorticism.
- Zoonotic diseases.
  - a. Scabies, ringworm, rabies, bacterial fecal pathogens (e.g., salmonellosis).