

# Proper Management

- Allows animal owners to prevent causes, prevent symptoms and treat diseases
- Involves the following techniques:
  - providing shelter
  - cleaning and sanitizing
  - providing a good diet
  - monitoring health daily
  - isolating new animals

# Signs of Healthy Animals

- Include the following:
  - alertness
  - normal feces and urine
  - normal vital signs
  - sleek coat
  - eating and drinking normally



# Signs of Unhealthy Animals

- Include the following:
  - lethargic
  - rough hair coat
  - dull eyes
  - abnormal feces or urine
  - elevated vital signs
  - labored breathing or coughing
  - loss of appetite
  - runny nose
  - swelling



# Vital Signs

- Refers to the temperature, respiration rate and pulse of the body
- Provide critical information about an animal's state of health and can be used to not only detect but also monitor medical issues, such as diseases

# Temperature

- Is defined as the degree of heat of a living body
- Is considered a fever when it is elevated or above normal or considered hypothermic when it is below normal



# Respiration

- Is the act of breathing and is determined through the following examinations:
  - rate
    - number of inspirations per minute
  - depth
    - intensity or indication of strain
  - rhythm
    - change in duration of inspiration and expiration
  - sound
    - absence of noise
  - dyspnea
    - labored breathing

# Pulse Rate

- Is the measurement of the heart rate or the number of times the heart beats per minute
- Is determined through the following examinations:
  - frequency
    - number of beats per minute
  - rhythm
    - regular repeated pattern of beats
  - quality
    - tension on the arterial wall and volume of blood flow



# Animal Body Systems

- Include:
  - circulatory
  - respiratory
  - digestive
  - endocrine
  - immune
  - integumentary
  - nervous
  - skeletal
  - reproductive

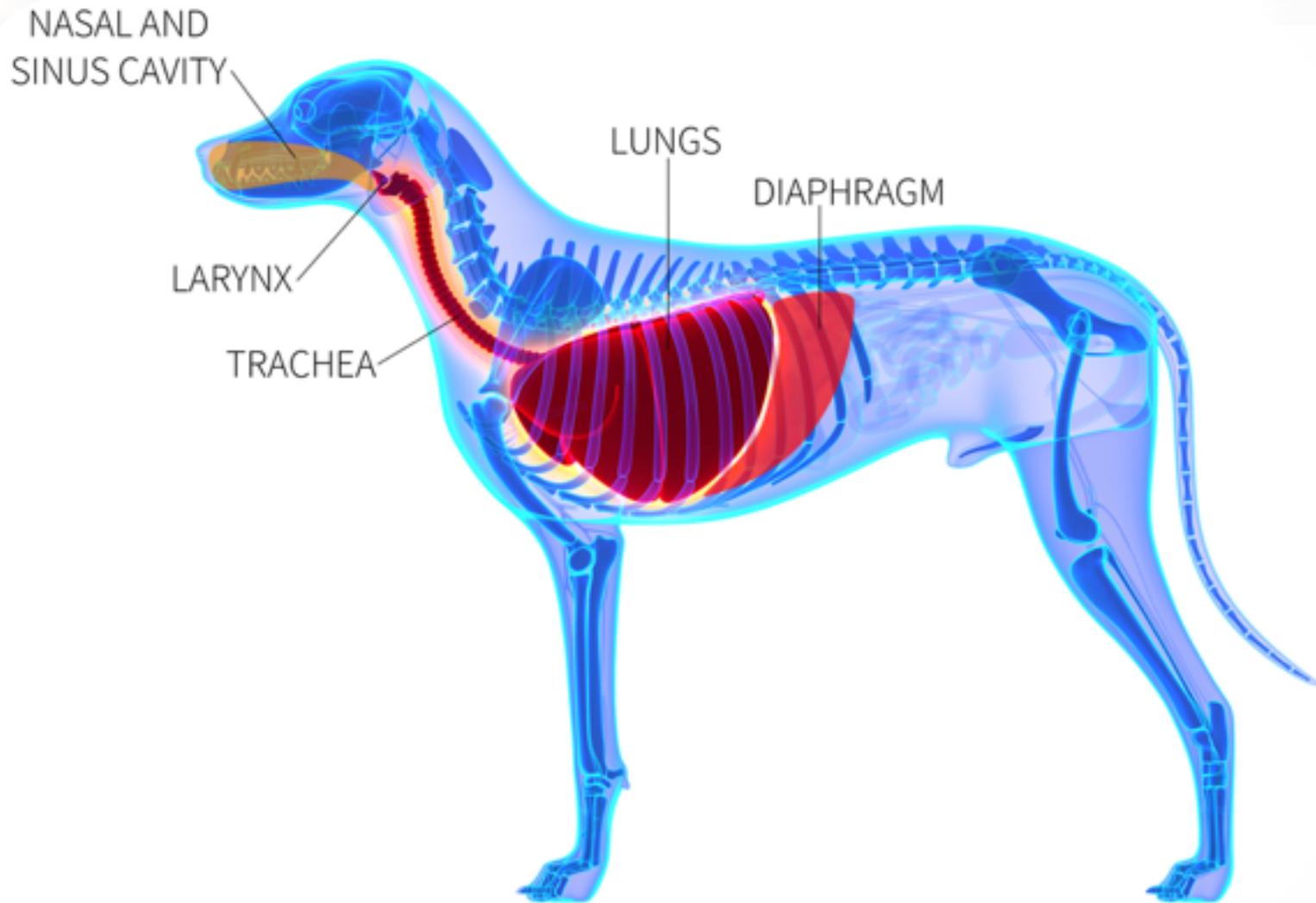
# Circulatory System

- Is designed to pump and deliver blood to the body's tissues
- Is made up of the heart, arteries, veins and blood

# Respiratory System

- Is made up of the nose, mouth, trachea, bronchi and lungs
- Provides the body with the exchange of oxygen and carbon dioxide
- Is affected by disease through coughing, damage to the lungs and labored breathing

# Respiratory System



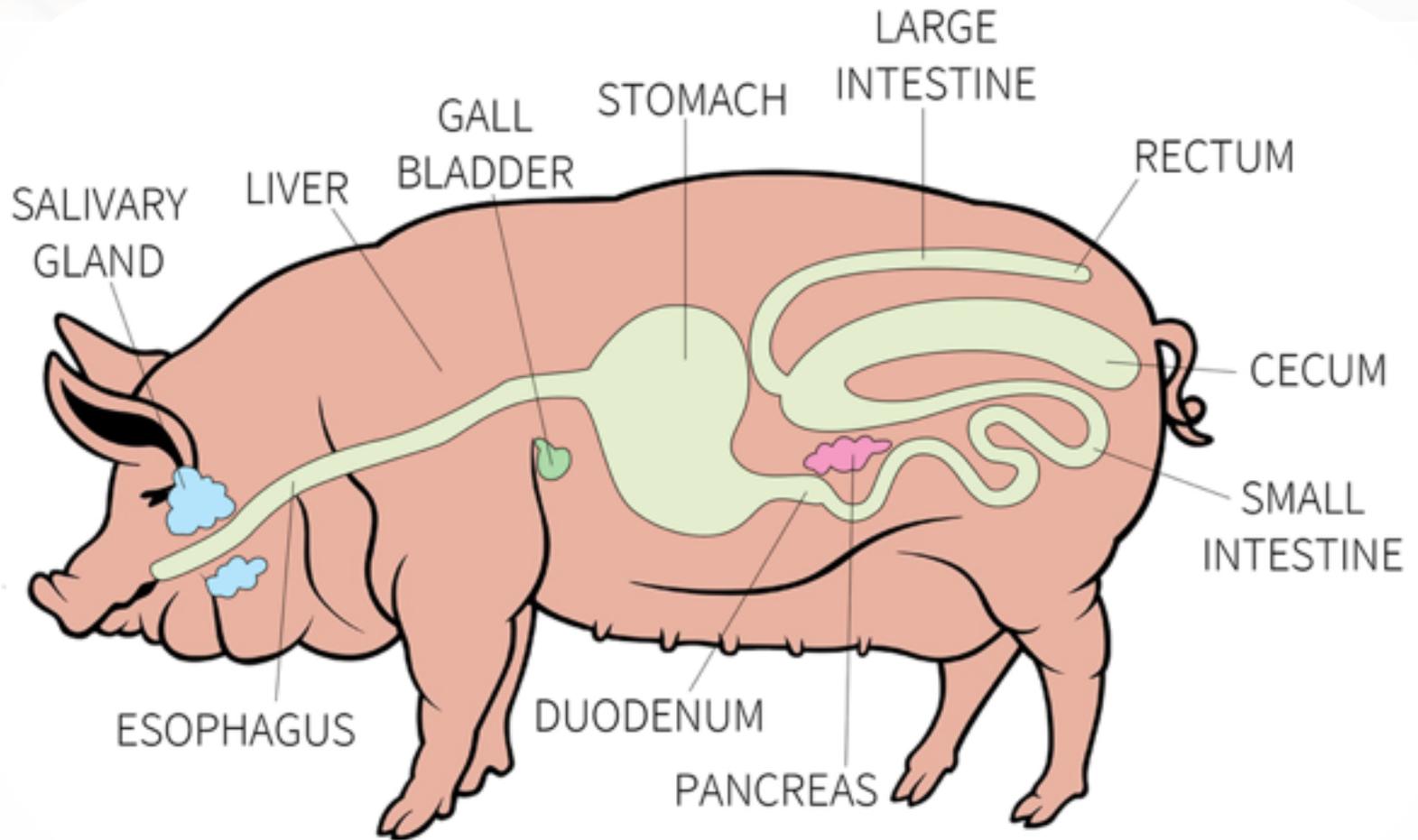
# Digestive System

- Breaks down food into simple substances which can be absorbed by the body
- Absorbs digested parts of food into the blood stream
- Is affected by disease through diarrhea, weight loss, intestinal damage and poor appetite

# Monogastric Digestive System

- Contains a single-chambered stomach
- Stomach is very muscular and stores ingested food and moves it into the small intestine
- Is found in humans, swine, dogs and cats

# Monogastric Digestive System

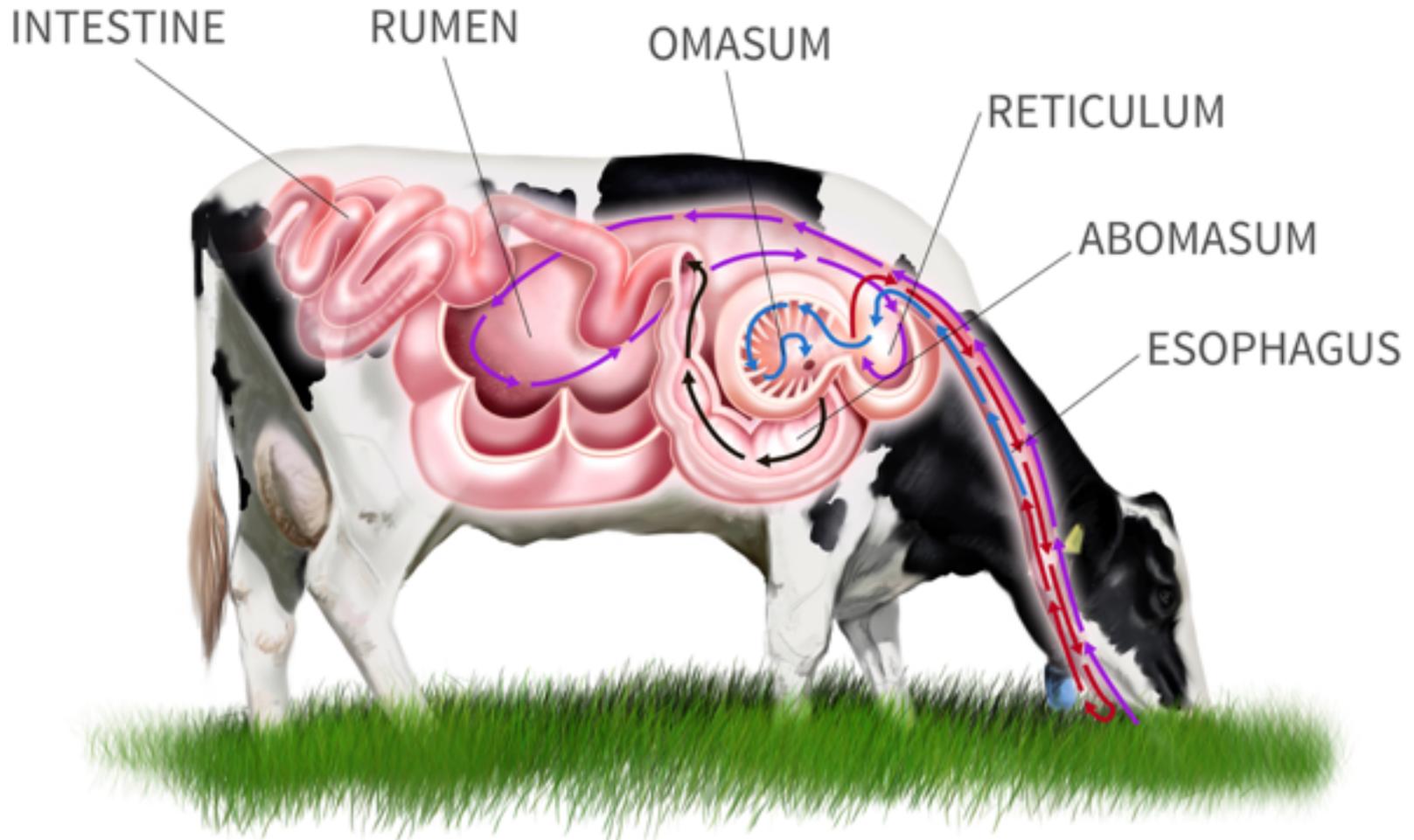


# Ruminant Digestive System

- Also known as polygastric
- Contains one large stomach which is divided into four compartments
  - Including:
    - rumen
    - reticulum
    - omasum
    - abomasum
- Is found in cattle, sheep and goats



# Ruminant Digestive System

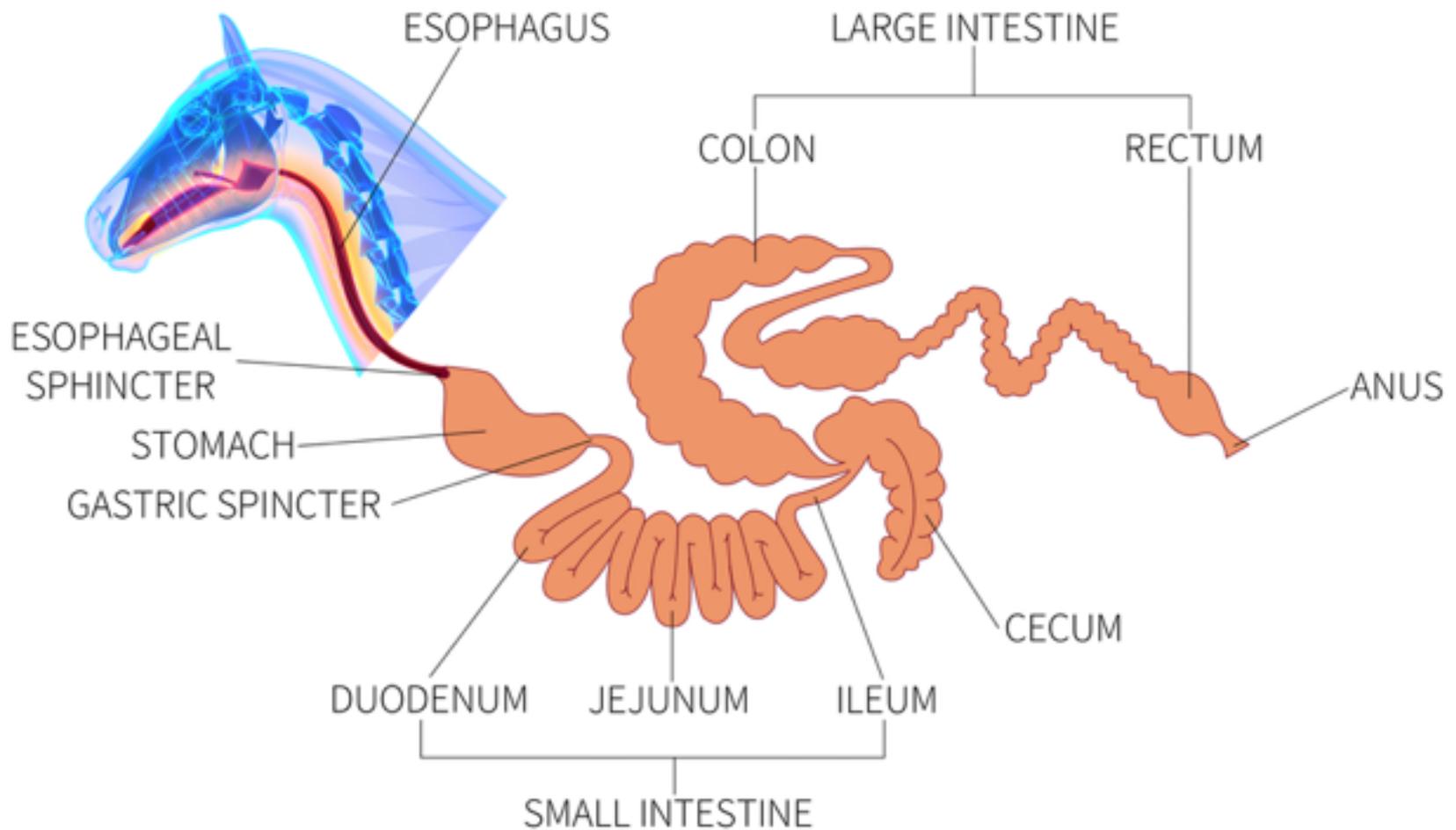


# Hindgut-Fermenter Digestive System

- Is found in animals who eat large amounts of roughage
- Is similar to ruminants, however does not have stomachs with several compartments
- Is found in horses, rabbits, guinea pigs and hamsters



# Hindgut-Fermenter Digestive System

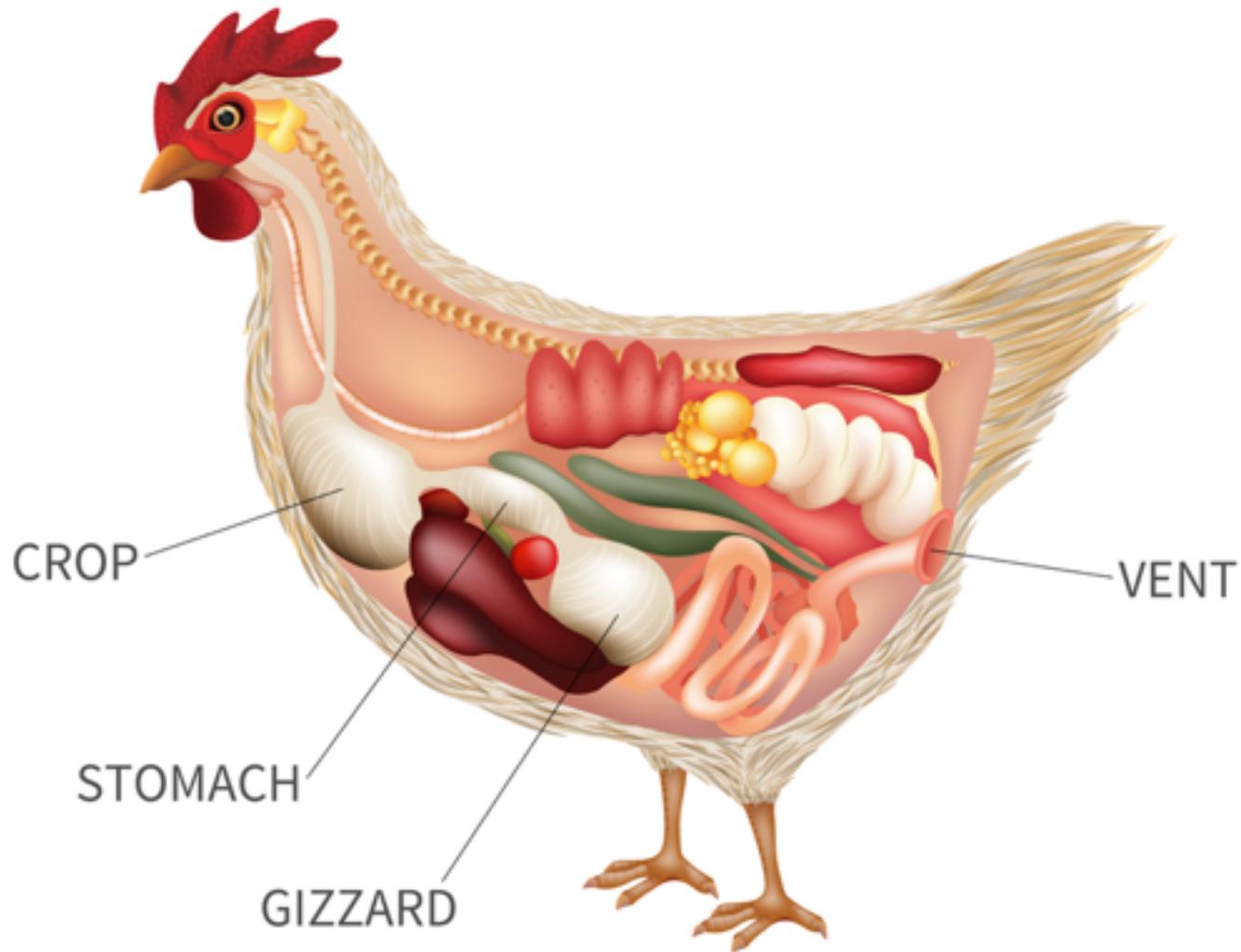


# Avian Digestive System

- Highly differs from the previous digestive systems because the bird has no teeth
- Is made up of the esophagus which empties directly into the crop, where the food is stored and then grinded by the gizzard with stones or grit
- Is a very fast process



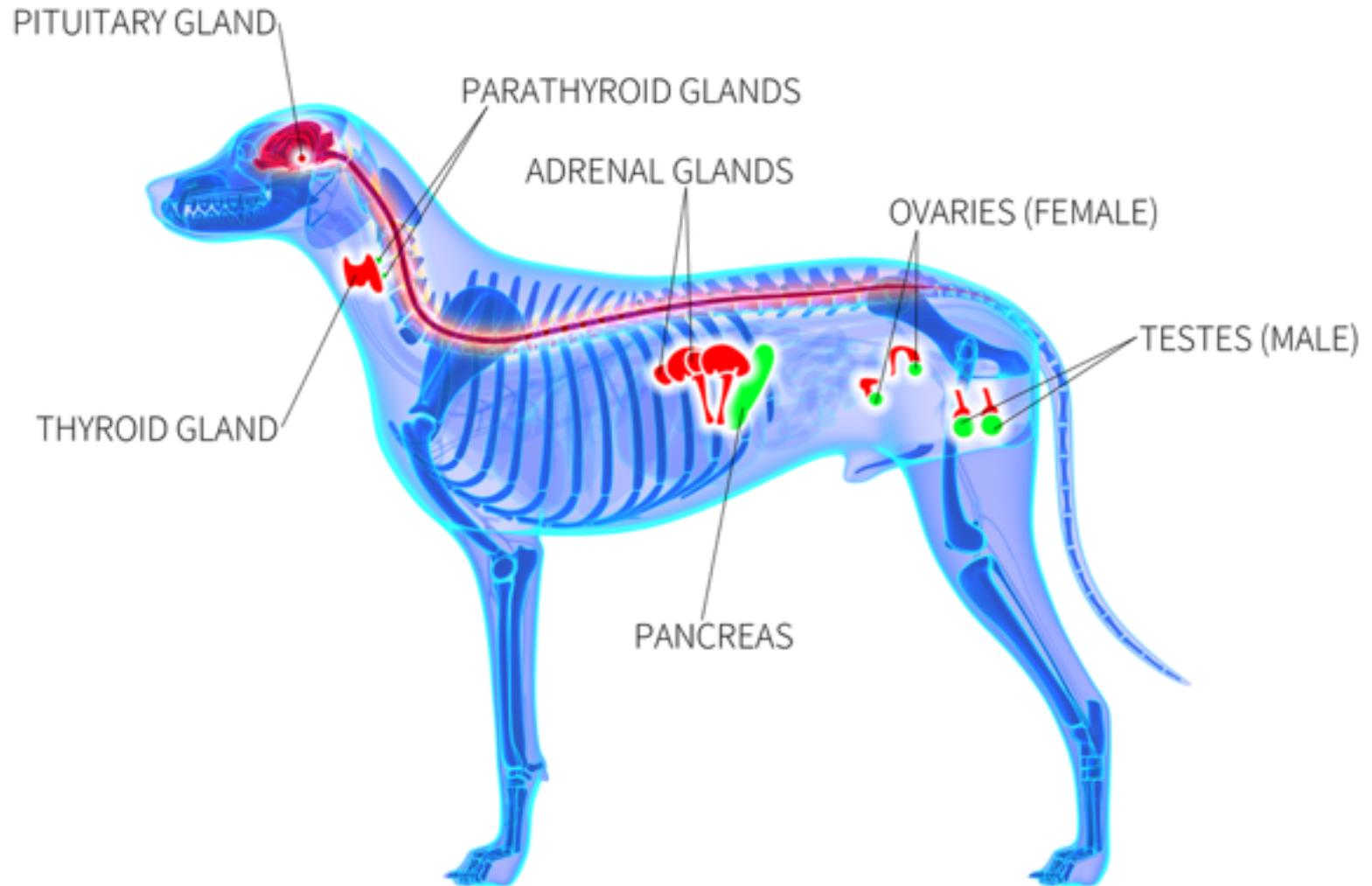
# Avian Digestive System



# Endocrine System

- Produces hormones which regulate metabolism, growth and development, tissue and sexual function, reproduction, sleep and mood
- Is made up of the pituitary gland, thyroid gland, parathyroid glands, adrenal glands, pancreas, ovaries and testicles

# Endocrine System



# Immune System

- Defends the body against infectious organisms and other invaders
- Attacks organisms and substances which invade an animal's system and causes diseases
- Is made up of lymph nodes, cells, proteins, tissues and organs
- Is affected by disease through reduced immune response

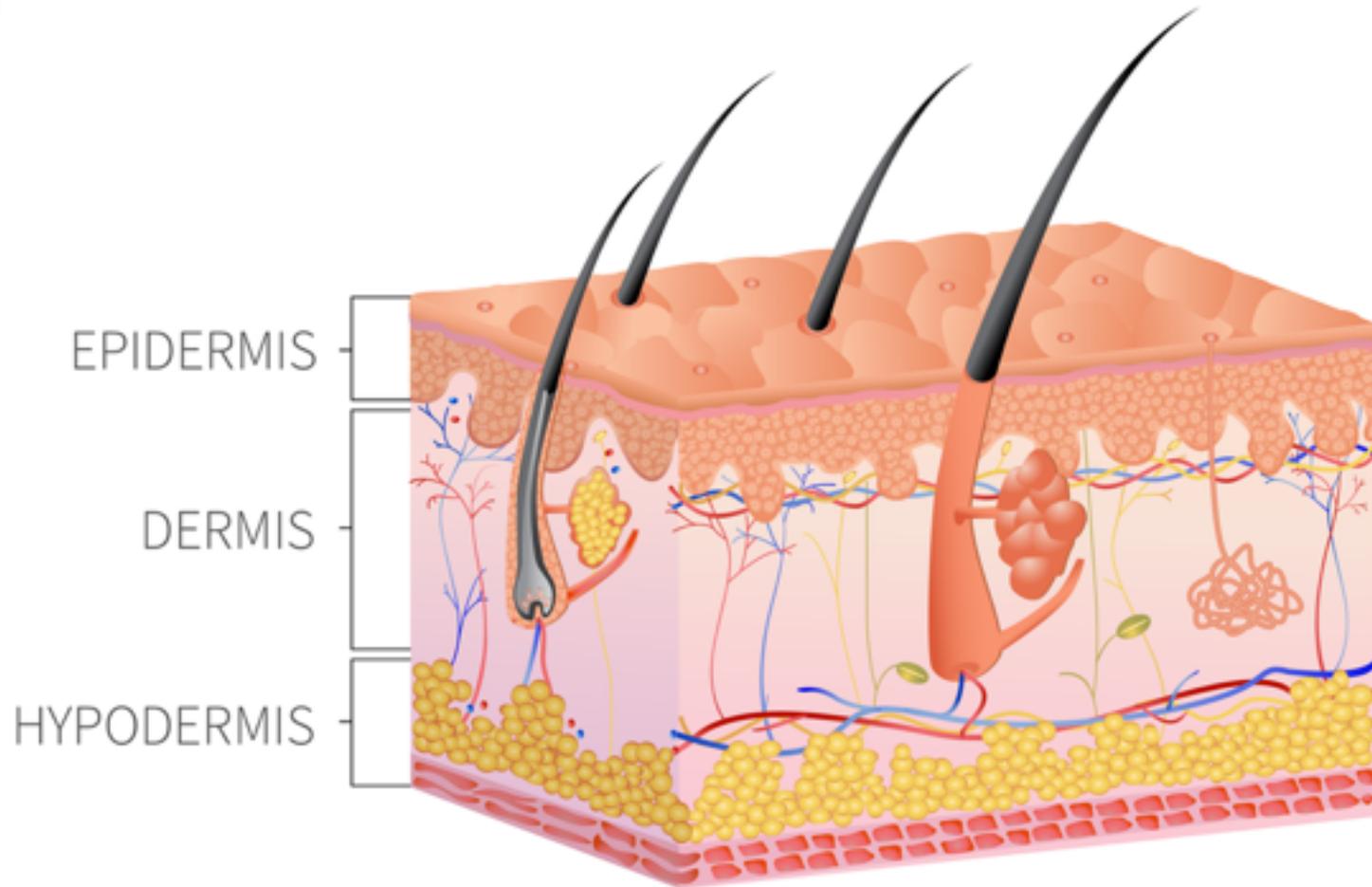
# Integumentary System

- Protects the animal's body from disease by providing a barrier to viruses and bacteria
- Protects the body from dehydration, overheating or freezing
- Is affected by disease through irritation, itching, scratching, rough hair coat, hair falling out, crusty skin and lesions

# Integumentary System

- Is the largest organ in the body and includes the following:
  - hair
  - feathers
  - scales
  - nails
  - hooves
  - horns
  - skin

# Integumentary System



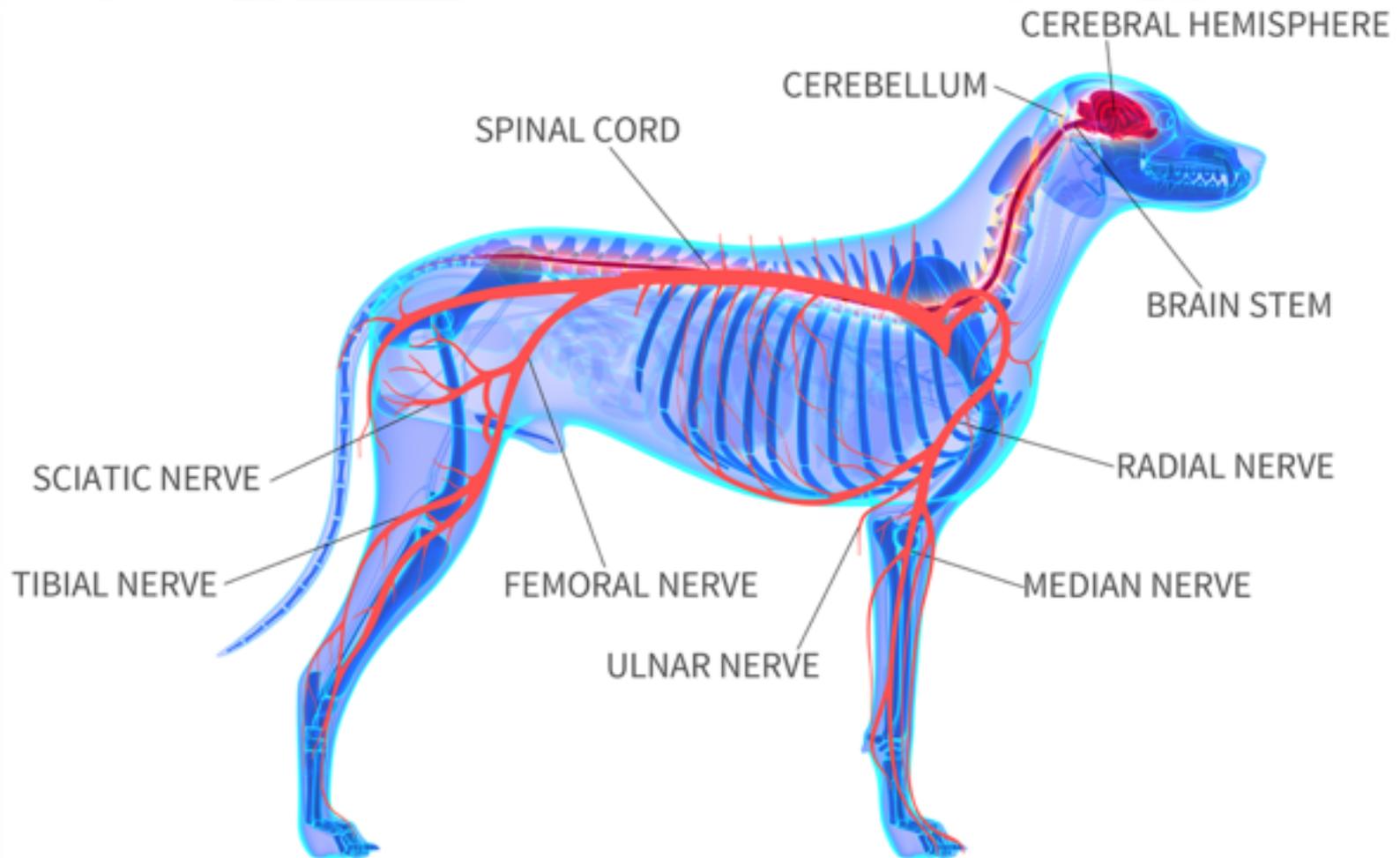
# Nervous System

- Transmits signals to different parts of the animal's body and operates basic body functions like breathing and digestion
- Is affected by disease through poor coordination, tremors, convulsions and changes to behavior

# Nervous System

- Includes:
  - central nervous system
    - which is the brain and spinal cord
  - peripheral nervous system
    - which is made up of the nerves and ganglia

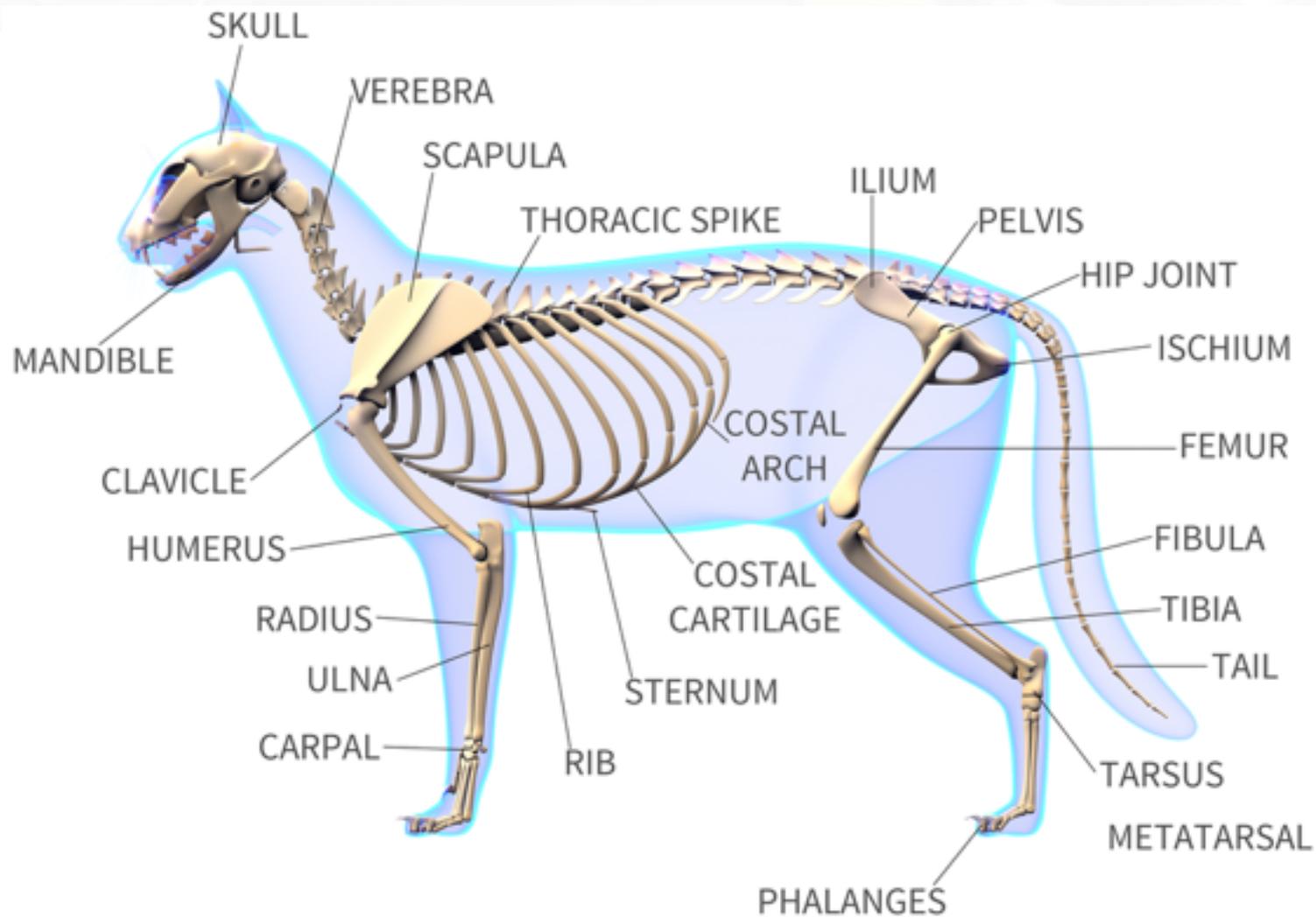
# Nervous System



# Skeletal System

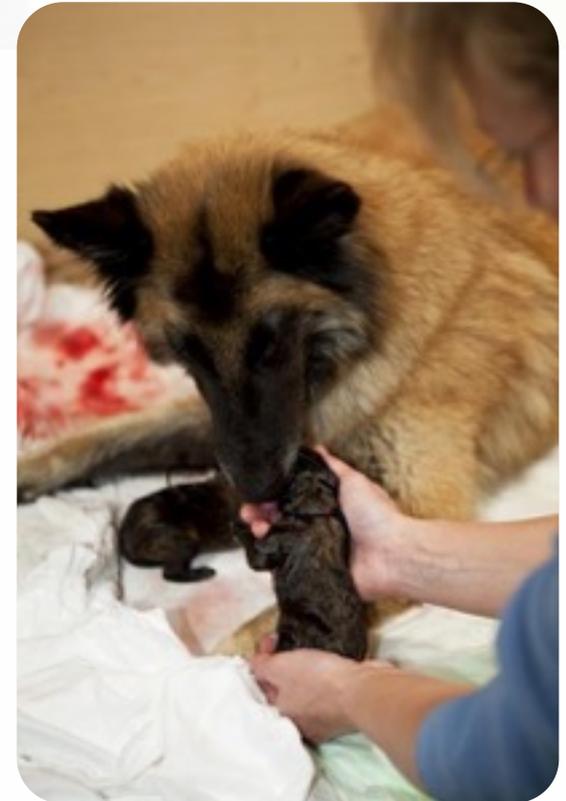
- Protects and supports the body tissues and internal organs
- Is made up of bones and other connective tissues
- Is affected by disease through poor growth, muscle weakness, stiffness, lameness and muscle tremors

# Skeletal System



# Reproductive System

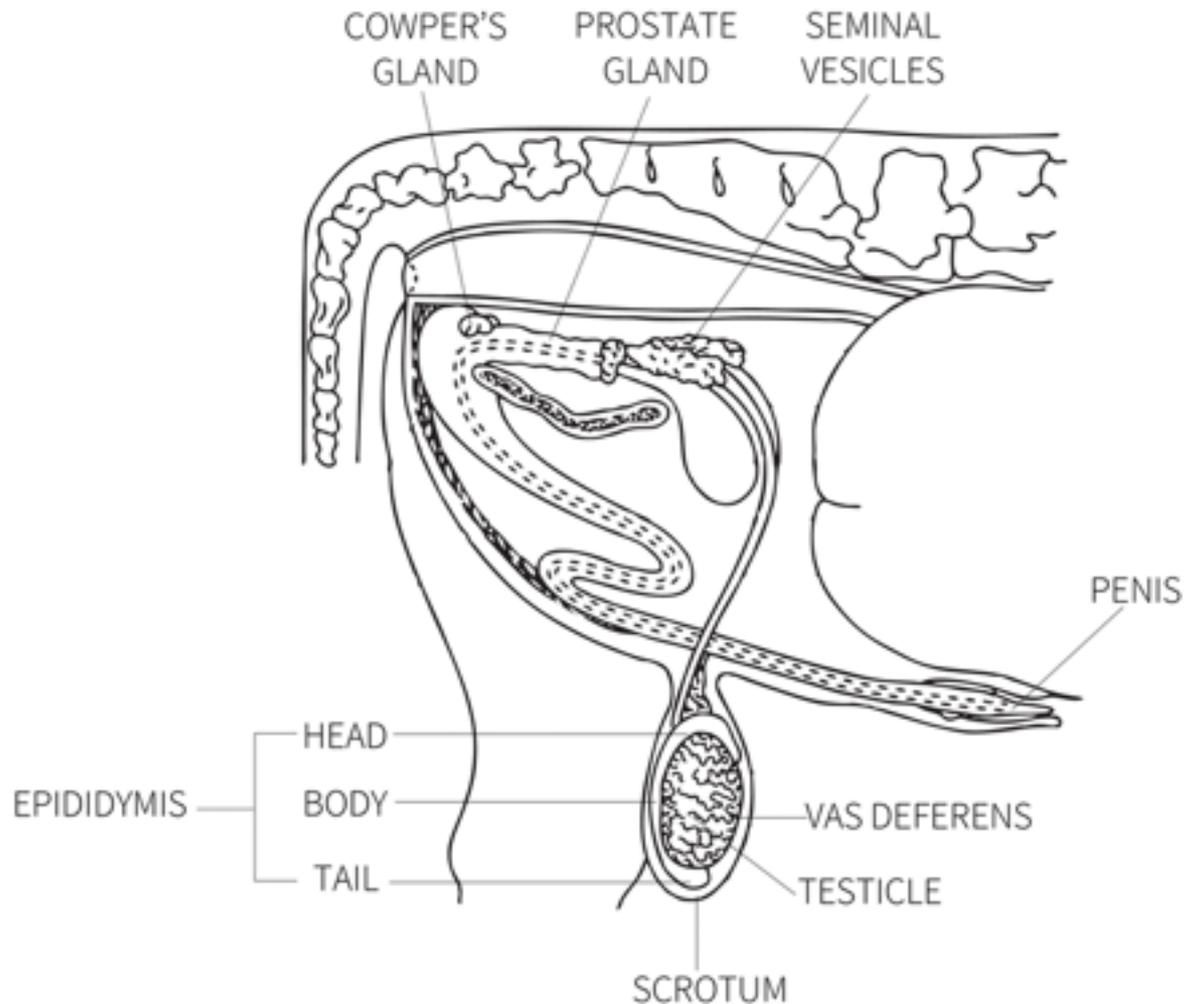
- Is a system of sex organs within animals which work together for the purpose of sexual reproduction
- Is affected by disease through lowered fertility rates, lactation problems and reproductive unsoundness



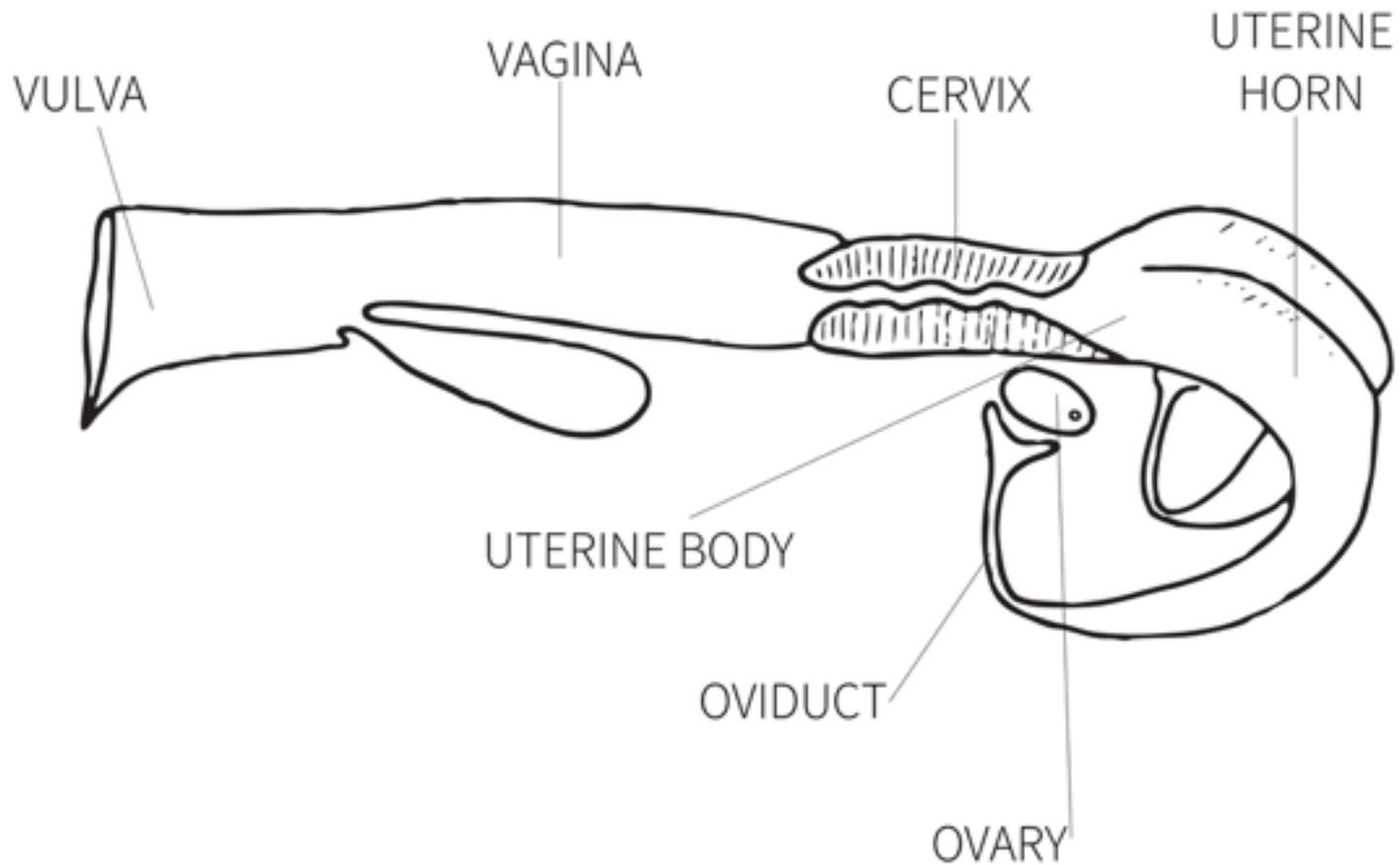
# Reproductive System

- Female anatomy includes:
  - ovaries
  - uterus
  - vagina
  - vulva
  - utter
- Male anatomy includes:
  - penis
  - testes

# Male Reproductive System



# Female Reproductive System



# Common Dog Diseases

- Include:
  - heart disease
  - heartworm disease
  - canine distemper
  - canine parvovirus
  - kennel cough
  - lyme disease



# Canine Heart Disease

- Can be present at birth or acquired
- Normally develops during middle age
- Causes heart failure
  - results from the heart's inability to pump blood at a rate required to meet the body's needs



# Canine Heart Disease

- Symptoms include:
  - early stages have no visible signs
  - heart enlargement
  - coughing
  - difficulty breathing
  - loss of appetite



# Canine Heart Disease

- Treatment includes:
  - there is no cure, but medications can be provided by your veterinarian to treat the symptoms
- Prevention includes:
  - regular check-ups
  - moderate exercise
  - balanced diet

# Heartworms

- Can affect any dog whether it is an indoor or outdoor pet
- Occurs when an infected female mosquito bites a dog and the larvae migrate through the tissues and eventually into a dog's heart
- When mature are from six to 14 inches long

# Heartworms

- Symptoms may not be visible until later stages of infection
- Symptoms include:
  - dull coat
  - lack of energy
  - coughing and difficulty breathing
  - enlarged abdomen

# Heartworms

- Treatment can be dangerous, expensive and includes the following:
  - involves a series of injections
  - no vigorous activity
  - large amounts of rest
  - preventive medication given once heartworms are eliminated



# Heartworms

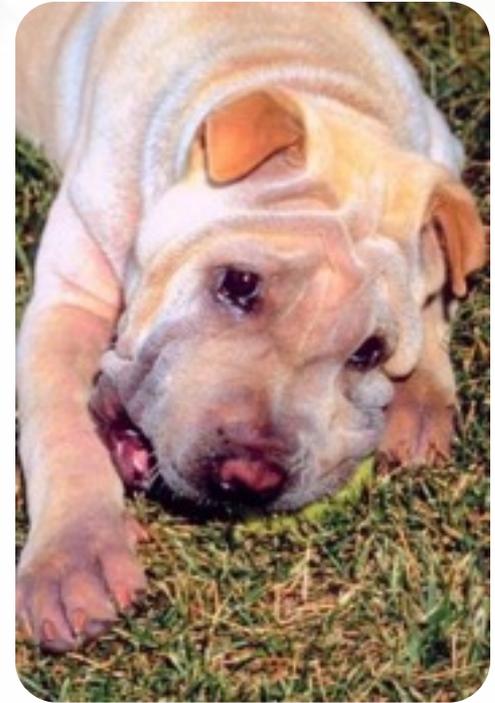
- Prevention includes:
  - once-a-month heart worm oral medication year round
  - testing for heartworms at least once a year

# Canine Distemper

- Is a virus
- Damages a dog's nervous system
- Is highly contagious
- Is transmitted by contact with infected urine, fecal material or saliva

# Canine Distemper

- Symptoms can be mild to extreme and include the following:
  - constant squinting
  - congestion of the eyes
  - pus discharge from the eyes and nose
  - weight loss
  - vomiting



# Canine Distemper

- Treatment includes:
  - there is no cure, but medications can be given to treat symptoms
- Prevention includes:
  - vaccination is the best method
    - should occur when dogs receive early shots
  - isolation of sick dogs away from non infected dogs

# Canine Parvovirus (CPV)

- Is also called Parvo
- Is a viral disease which attacks the intestinal tract, white blood cells and the heart
- Is spread by dog-to-dog contact
  - fecal material of infected dogs can be carried on the hair and feet of dog, contaminated cages or shoes
- Is less likely to occur in single dog homes

# Canine Parvovirus (CPV)

- Symptoms include:
  - depression
  - loss of appetite
  - vomiting
  - diarrhea
  - fecal discoloration
  - blood in feces



# Canine Parvovirus (CPV)

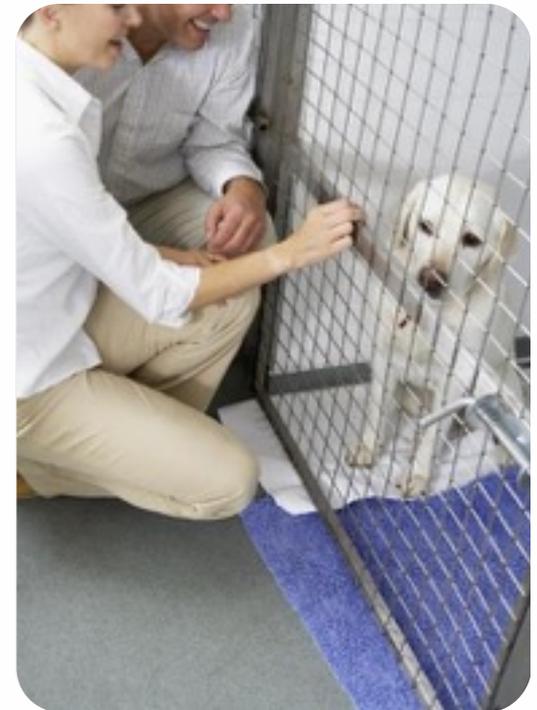
- Treatment includes:
  - combat dehydration with water and electrolytes
  - antibiotics given in the form of a shot or IV
  - rest

# Canine Parvovirus (CPV)

- Prevention includes:
  - vaccination
  - booster vaccinations
  - proper cleaning of kennels
  - keeping dogs away from fecal waste of other dogs

# Kennel Cough

- Is formally known as canine bordetellosis or bordetella
- Is caused by the bacteria *Bordetella bronchiseptica*
- Causes a severe chronic cough
- Is transmitted by contact with the nasal secretions of infected dogs



# Kennel Cough

- Symptoms include:
  - dry hacking cough followed by gagging
  - watery nasal discharge
  - lethargic
  - fever
  - pneumonia

# Kennel Cough

- Treatment includes:
  - for mild cases, let the disease run its course with a cough suppressant being administered
  - for severe cases, antibiotics are administered, water should be kept available at all times



# Kennel Cough

- Prevention includes:
  - avoid contact with other dogs, especially puppies
  - vaccinate



# Lyme Disease

- Is a bacterial infectious disease syndrome
- Is spread primarily by ticks
- Symptoms can last months after the disease has been treated

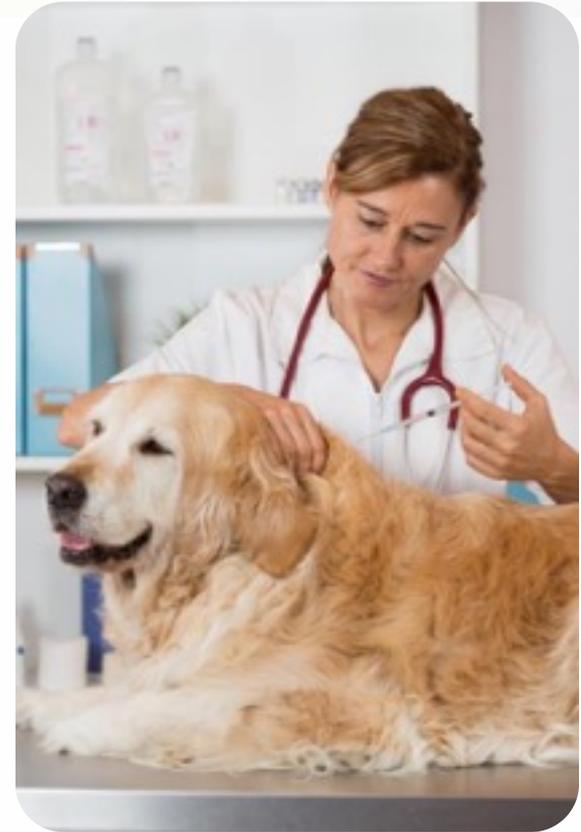


# Lyme Disease

- Symptoms include:
  - fever
  - loss of appetite
  - acute lameness
  - arthritis
  - weight loss

# Lyme Disease

- Treatment includes:
  - administering antibiotics
  - giving pain relievers
  - is a long process
- Prevention includes:
  - avoiding ticks
  - applying tick dips
  - vaccinations



# Common Cat Diseases

- Include:
  - heartworm disease
  - feline panleukopenia
  - feline leukemia virus
  - feline respiratory disease



# Heartworms

- Can affect any cat whether it is an indoor or outdoor pet
- Occurs when an infected female mosquito bites a cat and the larvae migrate through the tissues and eventually into a cat's heart
- Can also reside in the pulmonary arteries
- When mature are from nine to 11 inches long

# Heartworms

- Symptoms may not be visible until later stages of infection
- Symptoms include:
  - dull coat
  - lack of energy
  - coughing and difficulty breathing
  - enlarged abdomen
  - convulsions
  - sudden death



# Heartworms

- Treatment includes:
  - there are no approved treatments for cats
  - can use some dog treatments, but there are some side effects which can cause pulmonary failure
  - treat the symptoms of heart worms and hope the cat outlives the worms



# Heartworms

- Prevention includes:
  - once-a-month heart worm oral medication year round
  - testing for heartworms at least once a year

# Feline Panleukopenia

- Is also called feline distemper
- Is a highly contagious viral disease
- Usually occurs in groups of cats
- Is passed from cat-to-cat by direct contact or by fecal waste from infected cats
- Destroys a cat's cells making them more susceptible to other diseases and infections
- Has a very high mortality rate

# Feline Panleukopenia

- Symptoms include:
  - loss of appetite
  - depression
  - high fever
  - lethargy
  - vomiting
  - dehydration

# Feline Panleukopenia

- Treatment includes:
  - if reached is limited to supportive therapy
  - there are no antibiotics
  - try to combat dehydration and malnutrition
  - strict isolation
  - constant attention

# Feline Panleukopenia

- Prevention includes:
  - some cats will have immunity due to a survived mild case or have received the immunity from their mother
  - vaccinations

# Feline Leukemia Virus

- Is a fatal retrovirus affecting the cat's immune system
- Increases the cat's susceptibility to other disease
- Can be spread by contaminated nasal secretions, infected urine, feces and milk
- Does not survive for long outside of a cat's body

# Feline Leukemia Virus

- Symptoms include:
  - weight loss
  - recurring chronic illness
  - lethargy
  - fever
  - diarrhea
  - erratic breathing patterns
  - yellow color around the mouth



# Feline Leukemia

- Treatment includes:
  - there is no cure
  - confine cat to prevent exposure to non-infected cats
  - feed nutritionally balanced diets
  - avoid feeding raw foods
  - schedule check-ups for cat
- Prevention includes:
  - avoidance of infected cats
  - vaccination

# Feline Respiratory Diseases

- Include the following:
  - feline viral rhinotracheitis
  - feline calicivirus
  - feline pneumonitis
- Are highly contagious
- Are transmitted from cat-to-cat through direct contact, through the air by sneezing or coughing or by humans if they have been close to infected cats

# Feline Respiratory Diseases

- Symptoms include:
  - runny nose
  - sneezing
  - coughing
  - lethargy
  - fever
  - loss of appetite

# Feline Respiratory Diseases

- Treatment includes:
  - administering antibiotics
  - ensuring food and water intake
  - rest
- Prevention includes:
  - vaccination
  - avoidance of infected animals

# Resources

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# Acknowledgments

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