Lameness in Dogs

Basics

OVERVIEW
• “Lameness” is a clinical sign
• A disturbance in gait and locomotion in response to pain, injury, or abnormal anatomy

GENETICS
• Depends on specific disease

SIGNALMENT/DESCRIPTION OF PET
Species
• Dogs
Breed Predilections
• Depend on specific disease
Mean Age and Range
• Depend on specific disease
Predominant Sex
• Depends on specific disease

SIGNS/OBSERVED CHANGES IN THE PET
• Lameness—may involve one or more legs; varies in severity from subtle lameness to non-weight-bearing (that is, carrying the leg)
• Lameness may be better or worse after rest or after activity
• If only one front leg is involved—head and neck moves upward when the affected leg is placed on the ground and drops when the sound leg bears weight
• If only one hind leg is involved—pelvis drops when affected leg bears weight, rises when weight is lifted
• If both hind legs are involved—front legs are carried lower to shift weight forward
• Nervous system signs
• Posture may be abnormal when standing, getting up or laying down, or sitting
• Abnormal gait may be seen when walking, trotting, climbing stairs, or doing figure-eights
• May have loss of muscle mass (known as “muscle atrophy”)
• Bones and/or joints may be abnormal
• Decreased range of motion
• Pain
Grating detected with joint movement (known as “crepitus”)

**CAUSES**

**Front Leg Lameness**

*Growing Dog (Less than 12 Months of Age)*
- Osteochondrosis of the shoulder
- Shoulder dislocation (luxation) or partial dislocation (subluxation)—congenital (present at birth)
- Osteochondrosis of the elbow
- Ununited anconeal process
- Fragmented medial coronoid process
- Elbow incongruity
- Avulsion or calcification of the flexor muscles—elbow
- Asymmetric growth of the radius and ulna (bones of the foreleg)
- Panosteitis
- Hypertrophic osteodystrophy
- Trauma—soft tissue; bone; joint
- Infection—local; generalized (systemic)
- Nutritional imbalances
- Congenital (present at birth) abnormalities

*Mature Dog (Greater than 12 Months of Age)*
- Degenerative joint disease (progressive and permanent deterioration of joint cartilage)
- Bicipital tenosynovitis
- Calcification or mineralization of supraspinatus or infraspinatus tendon
- Contracture of supraspinatus or infraspinatus muscle
- Soft-tissue or bone cancer—primary; metastatic (cancer that has spread)
- Trauma—soft tissue; bone; joint
- Panosteitis
- Polyrheumatopies
- Polymyositis
- Polynueritus

**Rear Leg Lameness**

*Growing Dog (Less than 12 Months of Age)*
- Hip dysplasia
- Avascular necrosis of femoral head—Legg-Calvé-Perthes disease
- Osteochondritis of stifle
- Patella luxation—medial or lateral
- Osteochondritis of hock
- Panosteitis
- Hypertrophic osteodystrophy
- Trauma—soft tissue; bone; joint
- Infection—local; generalized (systemic)
- Nutritional imbalances
- Congenital (present at birth) abnormalities

*Mature Dog (Greater than 12 Months of Age)*
- Degenerative joint disease (progressive and permanent deterioration of joint cartilage), secondary to hip dysplasia
- Cruciate ligament disease
- Avulsion of long digital extensor tendon
- Soft-tissue or bone cancer—primary; metastatic (cancer that has spread)
- Trauma—soft tissue; bone; joint
- Panosteitis
- Polyrheumatopies
Polymyositis
Polyneuritis

**RISK FACTOR**
- Breed (size)
- Overweight
- Strenuous activity

**Treatment**

**HEALTH CARE**
- Depends on underlying cause

**ACTIVITY**
- Depends on underlying cause

**DIET**
- Depends on underlying cause
- Reducing diet, if dog is overweight or obese to decrease stress on joints

**SURGERY**
- Depends on underlying cause

**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 as all inclusive
- Pain relievers (known as “analgesics”) and nonsteroidal anti-inflammatory drugs (NSAIDs)—minimize pain; decrease inflammation; NSAIDs include such drugs as meloxicam, carprofen, etodolac, and deracoxib
- Steroids may be used in certain cases
- Medications intended to slow the progression of arthritic changes and protect joint cartilage (known as “chondroprotective drugs”), such as polysulfated glycosaminoglycans, glucosamine, and chondroitin sulfate—may help limit cartilage damage and degeneration; may help alleviate pain and inflammation

**Follow-Up Care**

**PATIENT MONITORING**
- Depends on underlying cause

**PREVENTIONS AND AVOIDANCE**
- Depend on underlying cause

**POSSIBLE COMPLICATIONS**
- Depend on underlying cause

**EXPECTED COURSE AND PROGNOSIS**
- Depend on underlying cause

**Key Points**
- “Lameness” is a clinical sign
- A disturbance in gait and locomotion in response to pain, injury, or abnormal anatomy