

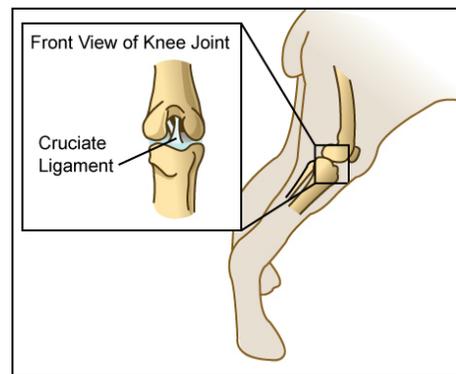
Testing for Patients Showing Lameness

What might be the cause of lameness in my pet?

The most common cause of lameness is trauma or injury. This injury may involve joints, ligaments, tendons, muscle or bone. Other causes of lameness include developmental or orthopedic diseases in young animals, degenerative joint disease in older pets, immune-mediated joint disease, infectious joint diseases, and tumors related to bones.

How do we determine the cause of lameness in my pet?

A thorough history and physical examination will provide us with 'clues' to the likely cause of lameness. Important points to note include whether the lameness occurred suddenly or was of a more gradual onset, whether the lameness involves one or several joints, whether the lameness is consistent or intermittent, and whether your pet is otherwise acting clinically well. Careful physical examination of the affected limb(s) may indicate swelling of the joint or perhaps localized swelling in the region of a fracture or tumor.



What diagnostic tests can be used to determine the cause of lameness?

Diagnostic tests that may be indicated include a complete blood count (CBC), a serum biochemistry profile, and a urinalysis. These blood and urine tests will likely only be suggested if we suspect that a systemic disease is a cause of your pet's lameness.

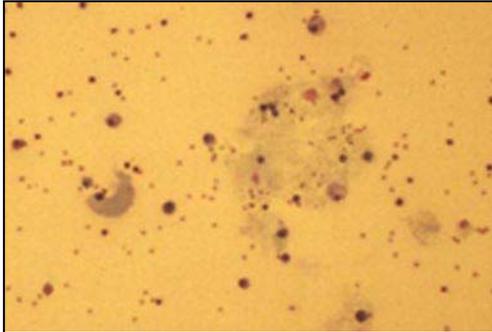
Other tests include radiographs (x-rays) of the affected limb, or joint fluid analysis if the cause of the lameness is suspected to be within the joint space(s).

How is joint fluid obtained and what will joint fluid aspiration determine?

Joint or synovial fluid is removed from an affected joint using a sterile needle attached to a small syringe. The hair over the joint is shaved and the skin is surgically scrubbed to minimize the possibility of bacterial contamination of the joint.

Some of the fluid is immediately spread onto microscope slides so that the cells contained within it can be evaluated. As well, some fluid may be collected into a sterile tube so that the protein content of the fluid can be obtained.

If there is inflammation within the joint, the protein content and number of cells in the joint fluid will be increased. The specific type of white blood cell that is elevated may help determine the cause of the increase. For example, a bacterial infection of a joint will result in increased numbers of neutrophils, whereas degenerative joint disease will result in increased numbers of mononuclear cells. Occasionally, infectious organisms or unusual cells such as tumor cells may be seen.



Joint Fluid Slide
*Image courtesy of Brent Hoff DVM,
DVSc, Clinical Pathology,
Ontario Veterinary College*

What additional diagnostic tests might be indicated?

Additional testing may include a culture of the aspirated joint fluid if bacterial infection is suspected.

Blood samples to detect antibodies against infectious agents may be taken if underlying diseases such as Lyme disease, ehrlichiosis, or fungal diseases are suspected.

If radiographs indicate the presence of a mass or a region of bone lysis, then fine needle aspiration or core biopsy of the lesion may be indicated to determine exactly what cell types

comprise the lesion. Radiographs of the chest cavity may be indicated if we suspect a bone tumor because such tumors often will metastasize (spread) to the lungs.

This client information sheet is based on material written by Kristiina Ruotsalo, DVM, DVSc, Dip ACVP & Margo S. Tant BSc, DVM, DVSc.

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