



WINN FELINE FOUNDATION

For the Health and Well-being of All Cats

637 Wyckoff Ave., Suite 336, Wyckoff, NJ 07481 • www.winnfelinefoundation.org
Toll Free 888-9MEOWIN (888-963-6946) • Local Phone 201-275-0624 • Fax 877-933-0939

Feline Hip Dysplasia

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Hip dysplasia is a disease of the hip joint. “Dysplasia” is a word that means abnormal development of a tissue. The hip is a ball and socket type of joint. The “ball” is the top of the femur (called the “head”) that fits into the “socket”, a depression in the pelvis called the acetabulum. A normal joint has a close fit of the femur’s head into the acetabulum, so that the joint functions smoothly and efficiently. The bones are coated with a layer of smooth cartilage that allows easy movement of the joint, and are lubricated with synovial fluid. The large muscles of the leg and pelvis hold the joint in place and allow it to function properly.



Above: X-rays of a cat with normal hips

In animals (including humans) with hip dysplasia, parts of the hip joint are abnormally shaped so that the fit of the ball into the socket is poor. This allows the head of the femur to partially dislocate, or move out of the joint to some degree (called “subluxation”). Over time, changes develop in the bones of the hip joint from this abnormal movement and degenerative joint disease may result. In most cases, both hip joints are affected, although one may be worse than the other. Many cats with hip dysplasia go undetected. Due to their low body weight, lack of exercise compared to dogs, and their natural agility, cats may have mild to moderate hip dysplasia and still function normally. In some cats, hip dysplasia is found incidentally when they are X-Rayed for another reason. As most signs of hip dysplasia are due to the slow degeneration of the joint and development of arthritis, this disease is not obvious at birth, but develops as cats grow. The disease in cats is likely more similar to hip dysplasia in humans than in dogs.

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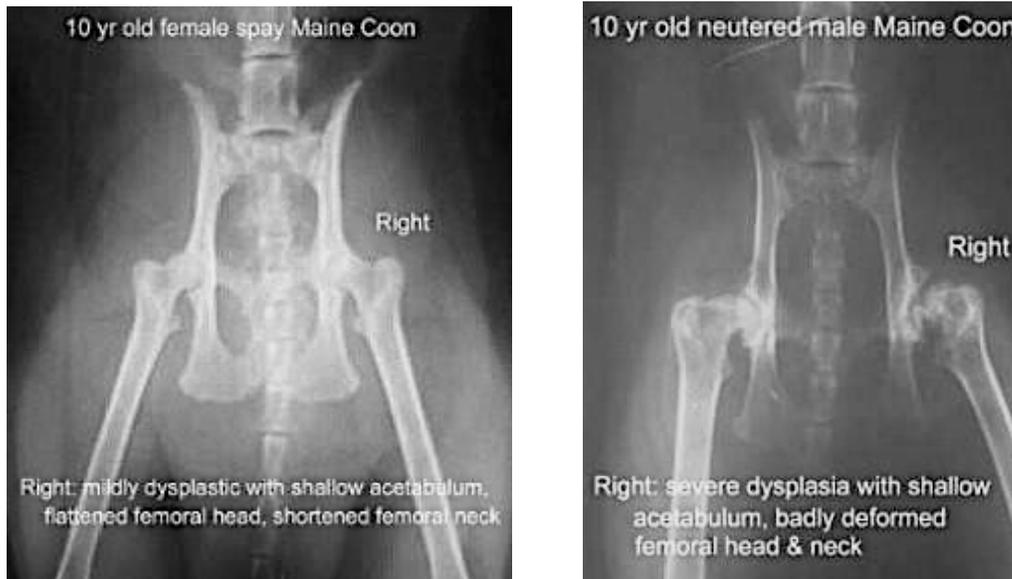


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While hip dysplasia has long been described in many dog breeds as an inherited disorder, it was not well known in cats until the last decades. Modern information and research has shown that this disease does exist in the cat and is likely an inherited disorder. No single gene is thought to be responsible for hip dysplasia in either the dog or the cat, but rather a complex interplay of several genetic factors. Cats who are affected with hip dysplasia have parents who are either carriers or themselves affected. Overall, between 6.5% and 32% of cats are affected with hip dysplasia.



Above: X-rays of two cats with mild (left) and severe (right) hip dysplasia. In both animals the right hip is more severely diseased

Some cats with hip dysplasia, especially the more severely affected, will have obvious symptoms and experience pain. They may be stiff when they walk and may be reluctant to jump or climb. They may appear lame from time to time. In some cases, the symptoms only appear after a traumatic event such as a fall. Cats with clinical symptoms compatible with hip dysplasia can have the diagnosis confirmed with X-rays of the hips. A type of leg manipulation called the “Ortolani Sign” may be used, but should be performed under sedation. Your veterinarian will be able to see various abnormalities in the hip joint associated with hip dysplasia. In some cases, the hip joint will be subluxated. X-rays are essential to diagnose hip dysplasia, as a physical exam cannot easily distinguish it from other conditions such as femoral head fractures or Legg-Calve-Perthes disease.

Just as in dogs, the breeds of cats most likely to have hip dysplasia are the larger, heavy-boned breeds such as the Persian, Himalayan, and Maine Coon. The Maine Coon is the most commonly affected, with ~20% of cats showing signs. However, this disease also occurs in smaller, lighter breeds such as the Devon Rex. Hip dysplasia can and does occur in any breed and in non-pedigreed cats and many cats diagnosed with hip

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dysplasia will be ordinary domestic mixed breeds. Disease in females may be slightly more common than males. Cats with patellar luxation may be predisposed.

Several systems may be used to assess the severity of hip dysplasia in an affected animal and to screen for disease in cats selected for breeding. Diagnosis in a clinically affected animal is relatively straightforward and may involve the measurement of how far the femoral head is seated in the acetabulum, calculation of the “Norberg Angle”, the presence of arthritis around the hip bones, and the presence of certain change to the bone such as “Morgan’s line” or thickening of the femoral neck.

Screening for hip dysplasia is a crucial part of eliminating the disease, especially in breeds at high risk such as Maine Coons. This generally involves taking a series of X-rays using certain specifications and having them interpreted by orthopedic specialists. Several screening programs exist, including the Orthopedic Foundation for Animals (OFA) and PennHIP programs. While the programs use different grading systems, both attempt to classify the severity of hip dysplasia and determine which animals are appropriate to breed.

What about treatment of an affected cat? As previously mentioned, many cats with hip dysplasia will show no discomfort at all. If a cat is known to have dysplastic hips and is overweight, weight reduction will reduce the chances that pain or loss of function will be experienced. In cats with subclinical disease, maintaining a low body weight and the use of disease modifying agents such as fatty acids and glucosamine may be effective in decreasing the risk of clinical signs.

Many cats, however, are diagnosed with hip dysplasia because they developed clinical signs of lameness and pain. For these cats, several options are available. Veterinarians use anti-inflammatory and pain medications as well as dietary supplements designed to help with joint repair. Restricting exercise, such as limiting access to outdoors or the ability to climb up on objects, can be helpful to reduce pain, but may have the unwanted side effect of weight gain. Physiotherapy, hot and cold packs, therapeutic laser, and alternative medical techniques may also be helpful. Discussing the ideal medical and physiotherapy plan for your cat with your veterinarian is essential, as no two cats will be treated exactly the same.

For severely affected cats, medical management may not be effective. In this case, a surgery called “Femoral head and neck excision arthroplasty” (often abbreviated FHO) is widely available to remove damaged tissue and restore range of motion. Cats that have had this surgery can usually expect a full return of hip function and freedom from pain and discomfort once post-operative healing has occurred. Large amounts of physiotherapy are required in order to ensure a good outcome. Other surgeries include pectineus myotendotomy and triple pelvic osteotomy. These are rarely needed in cats and often carry higher rates of complications. They may be indicated in specific instances that should be discussed with an orthopedic specialist. Total hip replacement has been considered the gold standard for treatment of hip dysplasia, as it allows for a return to normal joint function. Cost has been the major barrier to this surgery, however with modern materials and techniques it is becoming a more affordable option and should be considered the first line salvage therapy whenever possible.

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For more information on arthritis in general, see the Winn Feline Foundation handout on Arthritis in Cats (www.winnfelinefoundation.org/education/cat-health-library).

Please Note: Winn Feline Foundation provides the feline health information on this site as a service to the public. Diagnosis and treatment of specific conditions should always be in consultation with one's own veterinarian. Winn Feline Foundation disclaims all warranties and liability related to the veterinary information provided on this site.

See Also:

Cornell Feline Health Center

http://www.vet.cornell.edu/fhc/Health_Information/hipdysplasia.cfm

PetMD

http://www.petmd.com/cat/conditions/musculoskeletal/c_ct_hip_dysplasia

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