

Bone Infection in Cats – Causes, Symptoms & Treatment

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About:

Osteomyelitis is either inflammation or infection of the bone. Bacteria are the most common pathogen, although systemic fungal infections can also spread to the bones.

The most common bacteria involved in osteomyelitis is *Staphylococcus sp*, *Streptococcus sp*, and *Escherichia coli* after trauma and/or surgery, and *Proteus sp*, *Klebsiella sp*, *Pasteurella sp* as well as anaerobes (bacteria that can live without oxygen) such as *Actinomyces sp*, *Clostridium sp*, and *Bacteroides sp* are common isolates from bite wounds.

Fungal organisms which can lead to bone infections include [blastomycosis](#), [aspergillosis](#), [histoplasmosis](#), and [Cryptococcosis](#).

Bone infection is more common cats than dogs due to cat bites during fighting. Entire male cats are at greater risk of developing puncture wounds from cat fights, and cats with compromised immune systems (such as FIV or FeLV) are more vulnerable to developing bacterial or fungal infections, however, osteomyelitis can occur in cats of any age, sex, and health status.

Causes:

Osteomyelitis has many possible causes, bones may become infected directly after surgery or trauma (where bacteria enters the site), or as a result of a systemic or local bacterial or fungal infection travelling to the bone through the bloodstream. Below are the most common causes of bone infection in cats:

- **Puncture wounds**, usually caused by another cat during a fight. The oral cavity has a high number of bacteria when a puncture wound occurs, bacteria are injected into the skin and deeper layers
- **Surgery** (post-traumatic osteomyelitis) such as treatment to repair fractured bones after a car accident which introduces bacteria to the site. Known as *post-traumatic osteomyelitis*.
- **Prosthetic joint implants** can cause osteomyelitis either by introducing bacteria during surgery (rare), or an inflammatory reaction to the implants (known as *non-infectious osteomyelitis*)
- **Soft tissue infection** which spreads to bones nearby
- **Dental infection** which can spread to the jawbone
- **Systemic bacterial or fungal infection** which spreads to the bone via the

bloodstream

- **Gunshot wounds.**

Symptoms:

Osteomyelitis can be acute (sudden onset) or chronic (waxing and waning over an extended period of time). The most common symptoms include lameness and pain. Other symptoms may include:

- Swelling around the affected area
- Draining tracts
- Pus may ooze from soft tissue surrounding the area
- Muscle atrophy (wasting)
- Swollen and painful joints close to the affected area
- Stiffness and reluctance to move
- Reluctance to put any weight on the affected leg
- Fever
- Loss of appetite
- Lethargy

If your cat has a systemic bacterial or fungal infection, additional symptoms may also be present.

Diagnosis:

Your veterinarian will perform a physical examination of your cat and obtain a medical history from you including recent surgery, trauma or known infections as well as how long symptoms have been present. He will need to perform some diagnostic tests including:

- Complete blood count, biochemical profile, and urinalysis which may reveal increased white blood cell count, which is indicative of an infection. Serum and urinalysis are usually unremarkable unless systemic infection or blood infection is present
- Bone x-rays can identify osteomyelitis but it may take some time for changes to appear in the bone
- MRI scans to differentiate between soft tissue and bone infection
- Aerobic and anaerobic bacterial cultures may be taken to identify the organism. This enables your veterinarian to prescribe the most suitable antibiotic for that particular bacteria. Samples may be obtained from the infected site or bone biopsies collected
- If a fungal infection is suspected, specific blood tests to identify antibodies to certain fungal infection as well as additional x-rays and samples of any secretions or discharges (if present) which will be sent off for evaluation
- If systemic bacterial infection is suspected, a blood sample may be taken and cultured to identify the specific bacteria

Treatment:

Antibiotic therapy is the treatment of choice for osteomyelitis. Bone infections are difficult to treat and the cat will require a long course of antibiotics.

Surgical debridement to remove all necrotic tissue and clean the area with sterile saline.

If there is a fracture of the bone, your veterinarian will stabilise it to ensure proper healing. In some cases, an implant may be used, which will be removed once the bone has healed. Severe fractures may require amputation of the affected limb.

Your veterinarian will schedule regular follow up appointments to monitor your cat's progress.

Cage rest will be necessary during recovery to prevent accidental injury as it heals.

Prevention:

- Thoroughly clean and apply a safe antiseptic to any bites, scratches or wounds
- Keep cats either indoors or in a cat enclosure to limit exposure to cars and other cats
- Prompt veterinary attention if your cat develops an abscess. Signs of an abscess include an area of swelling, pain, and heat. Abscesses in location where there is underlying bone close to the site are particularly at risk
- Maintain good oral hygiene to limit his chances of developing a dental infection. Regularly check your cat's mouth for signs of inflammation or infection
- Always follow your veterinarian's instructions when giving antibiotics to your cat and ensure you give the entire course.

