Limb deformity correction

Corrective osteotomy of the forelimb or hindlimb | Dogs and cats

A bone that has grown or healed in an abnormal shape may place uneven pressure on joints. Surgery will improve alignment and comfort.

About the procedure

Why is the leg crooked?

A deformity can develop when growth plates at the ends of bones grow unevenly or stop growing too early. It can also follow a fracture that has healed out of alignment. The bone may be bent, twisted, shortened or a combination of these. In the foreleg the radius and ulna can grow at different rates. In the hindleg abnormal thigh or shin bone shape can contribute to kneecap problems. Not every visible deformity causes pain or needs treatment.

How is the problem assessed?

The surgeon examines the whole limb, joint movement, gait and muscle mass. Carefully positioned X-rays are used to measure the shape and angles of the bones. CT and three-dimensional planning may be helpful, particularly when twisting is involved. In young animals, the remaining growth and the risk of further deformity are important. Treatment may be time-sensitive if a growth plate is still active.

What does corrective surgery involve?

A corrective osteotomy is a planned cut through the bone. The surgeon repositions the bone to improve alignment; a small wedge may be removed or a gap created, depending on the plan. A plate and screws or an external frame hold the correction. Some pets need a second bone treated, more than one cut, a graft or gradual correction using an adjustable frame. In young pets, a procedure to release a bone growing at a different rate may sometimes be appropriate.

What are the alternatives?

Mild, comfortable deformities may be monitored. Pain management, weight control or rehabilitation can help symptoms without changing bone shape. In growing pets, selected growth-related procedures may reduce progression. The best choice depends on symptoms, growth, joint damage and the risk of making correction more difficult later.

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Recovery, risks and home care

Recovery and home care

Expected outcome

The goal is better function and joint loading rather than a perfectly straight-looking leg. Arthritis may occur and growing animals may develop further deformity.

More common or important ongoing problems

Swelling, wound infection, stiffness, persistent lameness, incomplete correction or recurrence during growth can occur. Bone cuts may take longer to heal than expected.

Home care

Protect the healing bone with cage rest, which is strongly recommended and will help avoid many unnecessary complications. Allow only controlled lead trips until advised otherwise. Do not allow jumping, racing or stairs. Give prescribed pain relief and protect the incision. If an external frame is used, follow the separate frame-care plan and do not make unapproved adjustments. Rehabilitation should be tailored to the bones and joints involved.

Follow-up and return to activity

Wound checks are commonly needed around 10–14 days. X-rays are usually repeated during healing, often around 6–8 weeks, with earlier or more frequent imaging for growing animals or gradual correction. Many patients require 8–12 weeks of restriction, and complex cases may take several months. The surgeon will assess both bone healing and limb alignment before exercise increases.

When should I call?

Report new pain, a change in the shape or position of the limb, reduced use after improvement, wound discharge or any frame or implant problem. In a growing pet, a visible change in alignment between appointments should also be reported.

Questions to ask your vet

Is growth still taking place? Will correction be immediate or gradual? Could another procedure be needed later?

Discussing risks and complications

As with any surgical procedure, complications can occur. Your surgeon will discuss the possible complications, individual risks and expected outcome for your pet during the pre-operative consultation.

General anaesthesia can cause serious complications, including death. Your veterinary team will explain individual risks and alternatives.

Your veterinary team will discuss the recommended treatment, alternatives and the risks of general anaesthesia for your individual pet.

Important information

Check the wound daily; prevent licking and keep it dry. Give prescribed medicines only. Report vomiting, diarrhoea, poor appetite or increasing illness. For breathing difficulty, collapse, uncontrolled bleeding or severe distress, seek emergency care immediately.

Follow the personalised discharge plan; this sheet is not a consent form. Contact your own practice or its out-of-hours service for urgent care.