Joint fusion surgery

Arthrodesis | Selected elbow, knee, wrist or hock conditions

Joint fusion permanently stops movement at a severely damaged, arthritic or unstable joint. The aim is to provide a stable, less painful limb rather than restore normal joint movement.

About the procedure

Why would a joint need to be fused?

A joint may become so painful or unstable that other treatments cannot provide useful function. Causes include severe injury, ligament damage, longstanding arthritis, failed previous surgery or damage to the joint surfaces. Fusion may be considered when repair or replacement is not appropriate. The effect on walking depends on which joint is fused and the health of the rest of the limb.

What happens during arthrodesis?

The surgeon removes the remaining cartilage from the surfaces intended to fuse. The bones are placed at a carefully chosen angle and held with plates, screws or an external frame. Bone graft material may be used to encourage the bones to join. The body must then build bone across the old joint space. Implants maintain stability while the fusion develops.

Will my pet still be able to walk?

The fused joint will no longer bend. Your pet must adapt using other joints and muscles. Wrist and hock fusions can allow good limb function in many selected cases. Fusion of a major joint such as the elbow or knee has a larger impact on gait and may be reserved for difficult salvage situations. The surgeon will discuss the expected posture, gait and practical limitations for your pet.

What are the alternatives?

Depending on the original problem, joint reconstruction, replacement, a brace, pain management or amputation may be considered. Fusion is generally irreversible. When weighing the options, your vet will consider pain, stability, the condition of neighbouring joints and the likely quality of life.

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Recovery, risks and home care

Recovery and home care

Expected outcome

Fusion aims for a stable, comfortable joint, but movement is permanently lost at that joint. Other joints may carry more load and gait may remain altered.

How do I protect the fusion?

Strict cage rest is strongly recommended and will help avoid many unnecessary complications. Implants carry substantial load until the bones join. Use a secure area and short controlled lead trips. Casts and splints are generally avoided, but if a splint, cast or bandage is applied, keep it dry and inspect the exposed toes; attend all bandage checks. Bandage complications can be severe. Do not remove or alter it at home. Give pain relief and prevent wound licking.

Follow-up and rehabilitation

Your vet will arrange early wound or bandage checks and repeated X-rays to assess bone bridging. Fusion commonly takes several months; 6-12 weeks may be insufficient in complex cases. Activity increases only after the surgeon confirms adequate fusion. Rehabilitation may help maintain movement and strength in the neighbouring joints, but it cannot restore movement in the fused joint.

When should I call?

Report sudden pain, a change in limb angle, a loose or wet bandage, swollen or cold toes, wound discharge or an inability to use the leg. A change in implant or frame position requires urgent assessment.

Questions to ask your vet

What will walking look like after fusion? Will a splint be needed? How will you confirm that the bones have fused?

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.