

Arthrodesis

Your vet has arranged for me to see your pet to surgically fuse one of their joints (“arthrodesis”)

An arthrodesis is usually performed for one of two reasons; either to treat an injury to the joint which cannot be treated in any other way, or to fuse a chronically painful joint to eliminate pain.

Whatever the reason, an arthrodesis is a “salvage” procedure, i.e. it is a last resort when no other options are available, and we are accepting some loss of function as an inevitable consequence of having to do the procedure.

Arthrodesis is typically reserved for joints lower down the limb (e.g. wrist or ankle joints) because animals can cope reasonably well with loss of flexibility of these joints. Arthrodesis of shoulder/elbow/knee is occasionally done, but is much less successful and is seldom recommended.

To achieve arthrodesis, the joint needs to be immobilised. This is normally done with a plate and screws next to the bone, but can also be done with pins and an external frame.

The Operation

Your practice will make arrangements with you to drop your pet off on the day of the surgery. Please don't give breakfast on the morning of the procedure. If they are receiving pain relief, they can have their pain relief the night before the operation, but if you normally give it in the morning then please don't give it on the day. Please let the nurse/vet admitting your pet know when they last had pain relief, and also if you will need a further supply of any medication. I will probably not meet you in person on the day of the procedure, but I will speak to you by phone if possible. If you have any questions based on the information in this sheet then please feel free to ask me then.

Your pet will be mildly sedated to minimise stress, and then anaesthetised. We may need some further x-rays prior to surgery to make measurements. Your pet's leg will be prepared for surgery. The leg will be shaved widely to give us a large clean zone to minimise the risk of infection. A second area away from the main surgery site (usually near the shoulder) will also be prepared for part of the procedure (see below).

The procedure has 3 parts. Firstly we need to expose the joint and remove the cartilage lining from the bones, which is done using a high-speed burr. The joint will not fuse properly if this cartilage is left in place. Secondly, *cancellous bone graft* (spongy bone from elsewhere in the body – usually near the shoulder) is obtained and packed into the joint spaces. This encourages fusion of the bones. Thirdly a plate is applied to the area to immobilise it. The surgical wound is closed with stitches. Some further x-rays will be taken at the end of surgery to evaluate the position of the implants. Occasionally we may need to return to the operating theatre to adjust the positioning of one of the implants.

We may choose to put a cast on your pet's leg to give additional support and protection to the area. It is usually not advisable to put a cast on immediately after surgery due to swelling so this may need to be done 2-3 days after surgery. This may require an additional sedation or anaesthesia. Casts must be looked after carefully to avoid additional problems.

Your practice will arrange the post-operative care with you. Depending on your practice's arrangements for out-of-hours provision, it may be necessary for your pet to be transferred to another centre to continue their overnight recovery.

EXERCISE & RECOVERY

Before surgery, please obtain a crate or cage for your pet to be confined. This should be about twice the size they need to lie down comfortably. Your pet will be strictly rested for the first 6 weeks after surgery. More detailed instructions will be included in the discharge note.

Risks of Surgery

Arthrodesis does carry some risks that you should be aware of:

1. Infection – Infection is a small risk of all surgery. We will take all the same precautions to avoid infection as I would take if I were performing the surgery at a specialist hospital (drapes, gowns, gloves etc). Your pet will receive antibiotics during surgery and will also have a short course of antibiotics after surgery. You should monitor the wound after surgery for any excessive redness, swelling or discharge. If an infection does develop it will generally resolve with further medical treatment.
2. Failure of fusion – Although the surgery positions and immobilises the bones and encourages fusion of the joint, we are relying on the body's own mechanisms to complete the fusion. Sometimes, for reasons that are not always obvious this may not occur, and the implants may loosen or break prematurely. This may require further surgery or lead to a poor outcome. Excessive exercise/activity during the recovery period may contribute to this problem
3. Need to remove implants – because there is relatively little soft tissue covering around the wrist/ankle, the plate and screws sometimes become partially exposed long after the procedure. It may be necessary to remove the plate and screws later on to allow the skin to heal, but only once fusion is complete.
4. Failure to resolve pain – if the procedure is being done to treat a painful arthritic joint, then sometimes it may not completely get rid of the pain. Pain is a very complex thing which we don't always completely understand. Ongoing pain medication may be required to allow your pet to walk comfortably. Fortunately this is rare and arthrodesis is usually a good way to resolve pain from an arthritic joint.

There is a small risk associated with a general anaesthetic. Your vet may discuss with you whether you would like your pet to have a blood test prior to surgery to ensure that there are no underlying health problems or injuries that we were unaware of.

Thank you for entrusting the care of your pet to us, and I look forward to speaking to you on the day of the procedure.

Dr Richard Coe MA VetMB CertSAS MRCVS
Diplomate of the European College of Veterinary Surgeons (DipECVS)
RCVS & European Registered Specialist in Surgery

Dr Nick Goldfinch BVMS PhD PgC(Surg) GPCerts(SAS, SAM) MRCVS
RCVS Advanced Practitioner in Small Animal Surgery