

AUORTHOPAEDICS.CO.UK

Surgical management of elbow dysplasia

Elbow dysplasia is an umbrella name covering a range of elbow pathology. In the vast majority of cases, elbow dysplasia affects the 'inside' part of the joint, the medial side.

As elbow dysplasia is a developmental disease, it seems that early screening may help improve long term outcomes. Early screening implies xrays of the elbows at the age of 4 months old – please see our hip sheet as well. In some cases, repeating the xrays at 5 or 6 months old may be necessary.

Please see our 'Approach to elbow dysplasia info sheet' for more information.

For postoperative instructions, please see 'General orthopaedic' and 'Postoperative recovery' sheets.

Coronoidectomy - removal of the coronoid process

is one of the most common procedures performed for elbow dysplasia. The coronoid process can be diseased and painful. Removing this part of the bone can provide relief and a more comfortable elbow.

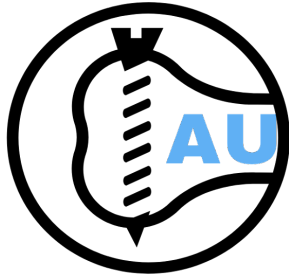
What to expect

The procedure is performed minimally invasive, so the trauma to the joint tends to be minimal. On rare occasions, a small incision would have to be made to remove larger fragments of bone that would not come out through the keyhole incision.

The outcome

Most dogs would walk well from the day of the procedure. However, lameness takes between 3 and 6 months to settle. This is because the elbow joint is a very unforgiving joint which takes a long time to settle down after any surgical trauma.

Most dogs will develop osteoarthritis throughout their life. The purpose of the surgery is offer a chance for a less painful and a functional elbow for as long as possible



Distal ulna ostectomy (DUO)

is performed in dogs of approximately 4-6 months old. The procedure involves cutting a small part of the ulna (one of the bones of the forearm), close to the wrist joint. This procedure would allow a better positioning of the ulna inside the elbow. The procedure is relatively fast, has minimal complications and can be done on both legs at the same time.

What to expect

After the procedure, your dog should be walked on a lead for 5 days. All the sutures should be hidden inside the skin and are resorbable. Limping is very rarely noticed but, if it does occur, it should subside in 3-5 days tops.

DUO has minimal complications. The most common ones are infections of the surgical site which are managed with antibiotics.

Some of the rare complications are fusion of the radius and ulna or premature healing of the bone cut. Surgical management may be needed for these rare complications.

The outcome

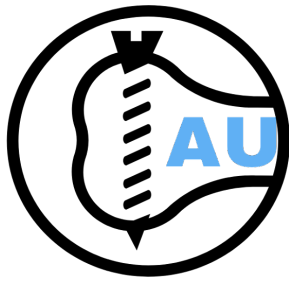
The procedure is designed to reduce the consequences of elbow dysplasia in adult life. In most cases this is accomplished but, as stated before, elbow dysplasia is a developmental disease. This means that things change during the growth phase and further investigations and/surgery may be needed later in life.

Proximal ulna osteotomy (PUO)

is a surgical procedure performed in dogs from 6 to 14 months old. The procedure involves cutting the ulna (a bone of the forearm) close to the elbow joint. This should allow a better positioning of the ulna inside the elbow. In the vast majority of times, PUO procedure needs an arthroscopy performed at the same time. The arthroscopy is performed to confirm the elbow disease, provide surgical treatment if necessary and provide a prognosis.

PUO is a more invasive procedure than DUO and we will only perform it on one leg at a time. If your dog friend needs PUO in both legs, we will wait 4-5 weeks between surgeries.





AUORTHOPAEDICS.CO.UK

What to expect

POU is more invasive than DUO. The ulna cut is painful and lameness is noticeable for 3-6 months. The lameness is usually worse than before the surgery. However, progressive improvement of the lameness should be noticed each month.

The sutures are resorbable and the incision should be clean and dry. Sometime, a fluid filled bubble is noticeable under the incision. This may be a seroma which is self-resolving but it can take 2-4 weeks to do so. Other minor complications are infection, wound breakdown, persistent lameness.

Major complications involve displacement of the ulna, persistent lameness, infection of the elbow joint. These complications may need further surgery to resolve.

The outcome

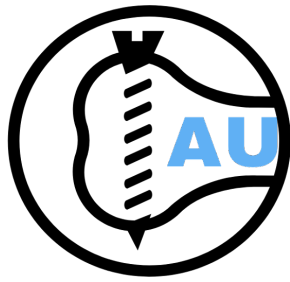
PUO is designed to reduce the impact of elbow dysplasia in dogs but it cannot 'fix' an already 'ill' elbow.

As previously stated, all the surgical procedures for elbow dysplasia are performed to increase the chances of having a 'good' functional elbow with a good quality of life. However, if your dog needs a PUO, it means the damage of the elbow has already started. As a consequence, some dogs may need further surgery sooner or later in their life.

Proximal Abducting ULna osteotomy (PAUL)

is a salvage procedure reserved for adult dogs with elbow dysplasia that are not responding to medical management. We would recommend the procedure when your dog has been/is suspected of being diagnosed with elbow dysplasia, has been on various pain killers and anti-inflammatories but he/she is still lame.





AUORTHOPAEDICS.CO.UK

PAUL is reserved for mild cases of elbow dysplasia and not dogs with elbow dysplasia are suitable for PAUL. Arthroscopy of the elbow should always be performed before advising PAUL. Once we decide that your pet is a suitable candidate for PAUL, the ulna (one of the bones of the forearm) will be cut and a special plate will be used to fix the bone. This plate changes the location of the ulna in the elbow and also it shifts the weight towards the radius (another bone of the elbow).

In some cases, platelet rich plasma or stem cell therapy will be recommended as additional treatment. These new regenerative treatments stimulate the tissue growth. However, once the cartilage is damaged, it will never be replaced with 'true cartilage' but with a tissue that is the next best thing.

What to expect

The sutures are resorbable and the incision should be clean and dry. Lameness after the surgery is usually worse than before the surgery. Minor complications are infection and/or incision breakdown. Major complications include implant failure, fractures of the leg, persistent lameness, fusion of the radius to the ulna. Some of the major complications may need surgical management.

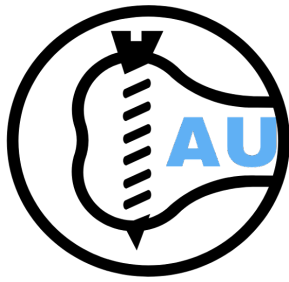
The outcome

PAUL is a salvage procedure which means the affected elbow disease will continue to progress. However, dogs are less lame after PAUL and they have a good function of the leg. In general, approximately 85-90% of the patients that have had PAUL improve their lameness score 6-12 months postoperative.

It is very important to remember that it can take up to 6 months for the lameness to subside after PAUL procedure. Please do not feel disheartened by this long recovery time. PAUL realigns the elbow joint and it takes time for the body to adjust to the new position.

Canine Unicompartmental Elbow resurfacing (CUE)

is a salvage procedure that resurfaces the inner side (medial compartment) of the elbow. This procedure is recommended for dogs with elbow dysplasia that do not respond to medical management. The procedure consists in placing two implants in the elbow joint. By doing so, the humerus and the ulna (the arm bone and one of the forearm bones) do not touch and rub each other, relieving the pain.



What to expect

A soft bandage should be used for the first 2-3 weeks postoperative. There seem to make a difference in pain levels of dogs with a bandaged leg than without.

The sutures are resorbable and the incision should be clean and dry. Lameness after surgery is usually worse than before the surgery. Minor complications include infection, incision breakdown or seroma. Major complications include infection of the implants, persistent lameness, implants subsidence.

The outcome

CUE is a salvage procedure aimed to relieve the pain and give a functional outcome of a diseased and osteoarthritic elbow. Unfortunately, the osteoarthritic changes cannot be resolved and will continue to progress. However, approximately 90% of patients with CUE have an improved function of the elbow 6 to 12 months postoperatively.

It is important to remember that lameness can take up to 6 months to resolve; also, in some cases, lameness never resolves because it is caused by osteoarthritic changes. Please do not feel disheartened by this long recovery time. CUE is invasive and, in some ways, it realigns the elbow joint. It takes time for the body to adjust to the new position but, as previously stated, most dogs will have a good use of the leg.

