

# Patellar Ligament Rupture

Your dog has suspected or confirmed rupture of the patellar ligament. This type of injury is rare; the ligament may rupture when quadriceps contraction occurs simultaneously with forced knee flexion. Altered biomechanical loading may increase the risk of patella ligament rupture e.g. fracture malunion. Rupture may also have been predisposed by an already weakened ligament e.g. primary degenerative changes in the ligament or weakening secondary to chronic corticosteroid use. Finally, a direct wound can cause tendon laceration.

## Prognosis:

The prognosis following surgical repair of patella ligament rupture is somewhat guarded. Healing of the patella ligament may be negatively affected by the following:

- Ligaments heal quite slowly and may take three to four months to reach satisfactory strength. Pre-existing pathology in the ligament e.g. degenerative changes or changes secondary to corticosteroid use will negatively affect healing; healing may take substantially longer and the ligament may remain permanently weaker.
- Contraction of the quadriceps muscles places the patella ligament under great strain, which can cause problems whilst the ligament is attempting to heal. To limit the degree of strain in the early stages of healing the stifle (knee) is typically immobilised with either an external skeletal fixator or bandaging (+/- splint).
- Running and particularly jumping substantial increase the forces the quadriceps places on the patellar ligament. It is important to be vigilant in this regard as a single episode of jumping may potentially break down the repair. Running and jumping should be avoided for at least four months.

## Complications:

Complications that may arise during or after surgery are detailed below (not exhaustive):

- Even though very uncommon, anaesthetic death can occur. With the use of modern anaesthetic protocols and careful monitoring the risk of problems with anaesthesia is minimised, but never eliminated.
- Infection is a relatively uncommon complication as strict sterile technique is used during the surgery and antibiotics are administered during and after the procedure. Should infection occur, early detection and treatment is imperative to avoid the infection damaging the repair. Occasionally the infection cannot be eliminated without removal of implants e.g. non-absorbable suture materials, orthopaedic wire etc once the ligament has healed. More serious problems may occur if infection progresses untreated or if your dog suffers infection with a multiple resistance bacteria e.g. MRSA. If you suspect an infection contact your VET immediately.
- Excessive early activity will reduce the likelihood of the ligament healing and may stretch the healing tissue or completely disrupt the repair resulting in poor limb function.
- Excessive activity will increase the likelihood of external skeletal fixator complications (where present). Over activity may cause premature loosening of the pins, or even fracture of the bone through the pin holes.
- Excessive activity will substantially increase the likelihood of bandage or splint associated complications (where present). Over activity causes excessive movement of the dressings against the skin which can result in "rub" or "pressure" sores. Additionally if the dressings slip they can become constrictive cutting off blood supply. If you suspect the bandages have slipped you should contact your Vet immediately.

- Once the ligament has satisfactorily healed it is still important to have a controlled, gradual increase in activity, similar to human patients undergoing rehabilitation following surgery. The ligament will gradually remodel and gain strength over a period of months. It may take many months before the ligament reaches full strength. If activity is increased too quickly after surgery straining and even stretching (or re-rupture) of the patella ligament may occur.
- As patellar ligament rupture involves the knee joint the development of some degree of osteoarthritis is inevitable, and may occasionally become debilitating.
- Internal implants e.g. orthopaedic wire may require removal once the ligament has healed.

**AFTERCARE OF YOUR DOG FOLLOWING SURGERY:**

Your dog should be kept confined (ideally to a large cage or alternatively a single room with **non-slip** flooring) to restrict activity. Short **leash** walks in the garden (a few minutes four to six times daily) are recommended to allow toileting. Confinement should be maintained at all times for at least the first six to eight weeks following surgery. **DO NOT** reduce the level of confinement unless specifically instructed to do so by your Vet.

If an external skeletal fixator has been applied it will need to be checked by your Vet at least once a week. If a bandage (+/- splint) has been applied it will need to be changed at least every five to seven days.

The external skeletal fixator or bandaging will typically be removed by four weeks following surgery.

Hydrotherapy may commence after four weeks provided there are no open bandage sores or pin tract wounds.

To reduce possible complications running and jumping should be avoided for **at least** four months following surgery.

**DECLARATION:**

I have read the information contained herein (2 pages) and am satisfied I have a sufficient understanding of the procedures my dog is scheduled to undergo, including potential complications that may occur and requirements for aftercare following surgery.

I hereby consent for my dog ..... to undergo patellar ligament repair as scheduled by my Vet.

Owner's signature:

Witness:

Print name:

Print name:

Date:

Date: