

# Patella Luxation

## What is patella luxation?

The patella, also known as the 'knee cap' is a small bone located within the patella tendon which attaches the quadriceps group of muscles to the tibia (shin bone). It is a vital part of the stifle joint, helping to extend the joint.

The patella should sit within a groove (sulcus) at the bottom of the femur, and patella luxation occurs when this bone pops out of the groove. Most commonly the patella luxates to the inside of the stifle joint which is referred to as medial luxation, but in some instances it can move to the outside of the joint, referred to as a lateral luxation. If the patella luxates out of the groove, this can show as an inability to properly extend the stifle joint, and can also show up as lameness.

## What are the signs of patella luxation?

Clinical signs of patella luxation can vary in severity, from a mild 'skipping' gait to a more pronounced and persistent lameness. Most pets will start to show signs of patella luxation when they are young adults, however signs can also become apparent when they are older. Patella luxation is graded on a scale of 1-4:

- Grade 1 - the patella can be manually luxated, but otherwise remains within the sulcus
- Grade 2 - the patella spontaneously luxates, often during exercise but will return to a normal position by itself. This is the most common presentation.
- Grade 3 - the patella permanently sits outside of the sulcus, but can be pushed back into a normal position manually
- Grade 4 - The patella permanently sits outside of the sulcus and can not be pushed back into its normal position

## How is patella luxation diagnosed?

Patella luxation is usually detected on a clinical examination with your own vets, after which you may be referred to our orthopaedic department.

A full orthopaedic assessment will be carried out to ensure that no other conditions affecting the stifle joint are present. Following a thorough examination we will obtain radiographs of the stifle joint. In some cases, advanced imaging such as CT may be necessary.

## How is patella luxation treated?

Not all cases of patella luxation require surgery. Most grade 1, and some grade 2 cases can be managed conservatively with rest, pain relief and physiotherapy and/or hydrotherapy.

For dogs who require surgery, the aim is to restore normal alignment of the quadriceps in relation to the rest of the limb. Several techniques are often used, either on their own or in combination:

- Tibial Tuberosity Transposition (TTT) - moving of the attachment point of the patella tendon on the tibia, which is then secured with a pin and wire
- Deepening of the groove in the femur (sulcoplasty)
- Soft tissue reconstruction - some of the tissues around the stifle joint can become either too tight, or too loose, and so this can be corrected

### **What happens after surgery?**

Most pets will return home either the day of surgery, or the following day. Pain relief will be continued at home for the first 1-2 weeks after surgery.

Exercise must be restricted post-operatively and cage rest is usually recommended during the initial recovery period. Short toilet walks on a lead are allowed during this initial period. A post-operative check up will be scheduled with one of our surgeons for 7-10 days after surgery, and gradual increases in exercise will be discussed at this point.

Physiotherapy and hydrotherapy can both play an important part in recovery, and appointments can be arranged with our rehabilitation team.