



Is an Orthosis an Option in Luxating Patella?

Luxating patella is a common developmental pathology in large and small breed dogs. It is usually diagnosed at a young age. The patella can luxate medially or laterally in any size dog. Severity of luxation is graded on a scale from 1-4. The most severe grade, 4, means that the patella is permanently located outside of the trochlear groove of the femur. Grade 1 is the least severe and is characterized by a patella that easily slips in and out of luxation, but is properly aligned in the trochlear groove most of the time.

In humans luxating patella occurs in various degrees of severity as well. Rehabilitation, bracing, and surgery are typical therapeutic options. Similar options are available for dogs with one important caveat. The human patella is fairly large and can be manipulated more easily with a brace system. This is very different than the dog.

The canine patella ranges in size from about 5mm (or a ½ of a pea) to 30mm (or a large lima bean). The former would be a toy breed and the latter a giant breed such as Great Dane. Even the large patella is not directly manageable with an orthosis. The patella cannot be held in place by straps or plastic shell. Rather the orientation of the tibia is manipulated to assist proper alignment and tracking of the patella within the trochlear groove. This is not possible with grade 3-4 luxating patellas and even some grade 2 luxating patellas cannot be helped with an orthosis. Generally speaking, grade 2-4 are surgical candidates although some grade 2 luxations never become sufficiently clinical to require surgery.

If an orthosis is used to manage grade 1 or a low grade 2 patellar luxation the following information is important to keep in mind.

1. **The device MUST be put on and removed daily.** The orthosis stabilizes the patella from the outside, while surgery does so from the inside. Therefore, it is important to follow the exact wearing schedule provided by OrthoPets. Wearing schedules vary with type of injury.
2. **Adjustments are expected and are a normal part of the custom orthosis process.** The device is custom-made for your dog. Every effort is made to accurately fit the device. If adjustments are required, it will be necessary to ship the device to OrthoPets with a turnaround time of 1-3 business days excluding shipping time. Even so, your dog is much more active at home than here at the clinic. Think of the last time you bought a new pair of hiking or ski boots; they needed some break in time right? Increased activity and activity intensity can expose fit issues requiring adjustment. Additional adjustments are most commonly required in the first few months and as time goes on (see importance of follow-up #4). Please follow all instructions with regard to monitoring the leg and contact OrthoPets promptly if you have concerns.
3. **Follow-up is critical to success.** An orthosis is considered a “durable medical device.” This means that proper use is necessary to meet therapeutic goals and to ensure its safe application over the lifetime of your dog or the duration of injury healing. In the first few months of fitting your doctor with the help of our OrthoPets team will see you and your dog for fit checks and coaching with regard to device use. Annual to twice annual appointments, depending on injury, age and activity of your dog, are needed. At these appointments your doctor will thoroughly assess your dog’s orthopedic condition and evaluate the condition/fit of the device. Recommendations will be made for continued success in the device.
4. **Rehabilitation, the first key for success.** Most dogs adapt quickly to wearing an orthosis. Behavioral techniques can facilitate this. Also your dog will need to learn basic skills while wearing the device. These include: transitions (sitting, lying down, and getting up), stairs, getting into vehicles safely, managing on different types of surfaces (ground, carpet, hardwood floor, etc.). Finally, orthopedic injury leads to compensatory abnormal movement and associated muscle strain and weakness. The best way to ensure the highest level of success with an orthosis is to follow a rehabilitation schedule. Each patient’s condition and abilities are unique and as such an individualized rehabilitation program is needed. OrthoPets strongly advises working with a certified canine rehabilitation professional (CCRT or CCRP). Please consult your family doctors or surgeon for referral to a veterinary rehabilitation professional in your area.
5. **A proactive approach to arthritis management is the second key to long-term success.** If the joint itself is injured rather than a ligament alone, osteoarthritis may develop. Just as rehabilitation is important, arthritis management is key as well. Steps taken early and continued throughout your dog’s lifetime will make a difference in terms of regaining and maintaining comfort and an active life-style well into the senior years. Consult with your doctors for a comprehensive pain management plan.