

## Tibial Plateau Levelling Osteotomy (TPLO) – What to Know & Expect

Following cranial (or anterior) cruciate ligament (CCL) rupture in the stifle (knee) joint of dogs, the stifle becomes unstable with weight-bearing, allowing the tibia to move forward relative to the femur. The top of the bone (called the tibial plateau) is not perpendicular (90 degrees) to the length (the axis) of the bone. TPLO (tibial plateau levelling osteotomy) surgery aims to make the tibial plateau perpendicular to the long axis of the bone to prevent the shin bone moving forwards.

Many patients with CCL rupture also suffer from meniscal damage, which also causes significant pain and lameness. The damaged section needs to be removed (known as a partial meniscectomy). This **meniscal (cartilage) surgery** is often conducted the same time as the TPLO surgery. Refer to our [Cranial Cruciate Ligament Rupture Fact Sheet](#) for further information.

**Preparation:** To prepare for your pet's appointment, read our [Client Preparation Guide](#) and [Sedation and Anesthetic Fact Sheet](#). We also recommend our clients become familiar with our [Terms and Conditions](#).

**Treatment:** X-rays are obtained of the stifle and tibia to assess the presence/severity of osteoarthritis and measure the angle of the tibial plateau. The surgeon evaluates the position of the cut on the bone, the amount the bone needs to be rotated, and plate size necessary to stabilize the bone in its new position. A synovial fluid sample may be taken for laboratory analysis. If cartilage (menisci) is torn, damaged portions will be removed and remnants of the ruptured ligament trimmed. The tibial plateau is then levelled by cutting the tibia and rotating the plateau. A special plate is then applied to the cut bone to level the tibial plateau and screws are "locked" into the plate, which makes the repair stronger. After surgery, x-rays assess the new angle of the tibial plateau and check the position of the plate/screws.

**Aftercare:** Medications are prescribed and exercise is very restricted for the first few weeks while soft tissues and bone heal. Patients must be on a lead or harness for toilet purposes to prevent strenuous activity. Confinement to a kennel or small room may be necessary to deter jumping/climbing. Post-op progress evaluations with the surgeon are imperative. At two weeks, the wound will be assessed. At four weeks, x-rays are obtained to evaluate bone healing. Depending on progress, advice is given regarding increasing exercise. Exercise may be gradually increased in a controlled manner (still on a lead). At 10 – 12 weeks, further clinical and radiographic examination is necessary to confirm successful recovery.