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Information Brochures

Commonly Asked Questions Regarding Triple Pelvic Osteotomy

What is Triple Pelvic Osteotomy (TPO)?

Triple Pelvic Osteotomy (TPO) is a procedure most commonly used in young dogs that have hip dysplasia. Dogs affected with hip dysplasia have looser than normal hips and a result of this is that many go on to develop pain and inflammation of the joint, i.e. arthritis. The hip joint is like a ball and socket. When a dog is affected with hip dysplasia, the ball (femoral head) drifts out of the socket (acetabulum). This results in less than normal covering of the femoral head. Triple Pelvic Osteotomy is a surgical technique that involves three cuts of the bone (triple osteotomy) around the joint that allows the surgeon to tilt the socket (acetabulum) over the ball (femoral head). The goal is to give a better fit to the joint to allow for better long-term function of the affected limb and to decrease the amount of arthritis that may develop.

Is my pet a candidate for Triple Pelvic Osteotomy?

Dogs that are the most likely candidates for TPO are usually medium to large breed dogs that are less than 12-16 months of age and showing signs of hip dysplasia with minimal arthritic changes. Your regular veterinarian best determines potential candidates for referral to the Orthopedic Surgery Service.

There are a number of examination techniques that may be used to determine if your pet is a surgical candidate. Not all dogs are surgical candidates. In some cases, arthritic changes may already be too severe for TPO to be of benefit to your pet. For these dogs, alternative procedures such as total hip replacement or femoral head ostectomy may be considered. In addition, many animals can do very well without surgical intervention. Pain and clinical signs settle in many dogs when they are 12 to 14 months of age.

One of the recent ways that we evaluate candidates for TPO is by arthroscopy. This is performed under anesthesia immediately prior to the intended surgical procedure. Arthroscopy involves putting a camera directly into the joint, which allows us to make a final judgment of the state of the joint. If there has been significant damage, then currently we do not recommend proceeding with the TPO.

Are both hips treated at the same time?

Hip replacement is always done on one hip at a time, never both at the same time. The risk of complications (dislocation) is very high if both hips are done at once, and often the dog will do very well after one hip replacement so replacement of the opposite hip is not required. Approximately 30-40% of dogs will require replacement of both hips. The second hip is typically operated on 6 months to 2 years after the first.

Can Triple Pelvic Osteotomy be done in all sizes of dogs?

Although smaller dogs (less than 40 lbs) can have Hip Dysplasia, often they show few clinical signs and may do well without any surgical intervention. Some of the smaller breeds that do show signs may be better candidates for a surgical procedure known as femoral head ostectomy (FHO). This involves removal of the femoral head and was one of the procedures used in humans prior to the acceptance of total hip replacement.

When is the best time to have this procedure performed?

Unlike many orthopedic procedures, there is some urgency when considering a TPO. There is a small window of opportunity when a TPO can be performed. Since the goal of the surgery is to limit arthritis and avoid future hip replacement, a TPO evaluation should be scheduled as soon as possible. Significant delay in the procedure may result in the patient no longer being an acceptable candidate due to the development of significant arthritis or other changes around the hip.

How do I make an appointment for my pet?

- Appointments for an orthopedic evaluation to determine if your pet is a candidate for TPO surgery are scheduled by referral only with the Orthopedic Surgery Service (530-752-1393).
- The Orthopedic Surgery Service is often booked several months in advance. When you call to make an appointment for a TPO evaluation please be certain that your appointment is within the next 2-3 weeks. If there are no appointments available, please ask to be forwarded to one of the orthopedic service coordinators.
- You may also choose to consult with a private surgery referral practice. To locate a board-certified veterinary surgeon in your area log on to www.acvs.org.

What information should I bring to my appointment?

Bring a copy of the medical record and any pertinent radiographs (X-rays) associated with the problem. Your veterinarian should provide you with a copy of the record upon request. If possible, a cover letter summarizing the problem is appreciated. Medical X-rays are legally a vital part of the medical record that must be maintained by your veterinarian. Most veterinarians will loan the X-rays to you but these must be returned once the assessment is completed. X-rays that are left at the VMTH will be mailed back to your veterinarian.

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What should I expect the day of my pet's exam?

- A senior student will evaluate your pet followed by a consultation with the resident or faculty surgeon. The objective of the consultation is to review pertinent history, conduct a thorough general and orthopedic examination, review previous radiographs, obtain or repeat additional radiographs if needed, confirm the diagnosis, and discuss treatment options.
- The length of the appointment ranges from 1-6 hours depending on the need for sedation, additional diagnostics, and recovery from sedatives. Anticipate spending most of the day in Davis before your pet's evaluation is complete. We advise you arrange your schedule accordingly and bring books or materials to entertain yourself. Many clients will be seen in the morning and may be asked to return later following completion of the evaluation. Drop-off appointments are not available unless previous arrangements have been made.
- Arrangements for the surgical procedure, if indicated, are determined at the time of the appointment. Surgeries are generally scheduled to occur 1-2 days after your scheduled appointment. All patients will be evaluated separately by the anesthesia service the day before the procedure. You should plan to hospitalize your pet at the VMTH on the day of the examination to facilitate preoperative assessments.
- Please anticipate leaving your dog for surgery. In general, we avoid consultation visits followed by surgery at a later date as this delays necessary surgery and makes scheduling more complicated.

How long will my pet be in the hospital?

Hospitalization of patients that have had Triple Pelvic Osteotomy typically ranges from 3-4 days including the day of the appointment, surgery, and recovery. In general, most patients are discharged 1-2 days after their surgical procedure, but extended hospitalization may be required if there are complications.

Are both hips treated at the same time?

Triple Pelvic Osteotomy is almost always done one hip at a time. The risk of complications is higher when both hips are done at once. The second hip is typically operated on 2 to 4 weeks after the first operation. Generally at the time of the first recheck appointment. Radiographs will be taken and if the bone osteotomy sites have healed well, and if it is applicable, then a second surgery will be performed on the opposite side. If your pet's healing is not advanced, surgery will be postponed for another 2 to 4 weeks. At that time, another radiograph will be taken to re-evaluate progression of bone healing.

What is the prognosis after TPO surgery?

If your pet is a good candidate for the procedure based on our selection criteria then he/she should have a good prognosis. The objective of surgery is to allow your pet to run, jump, and exercise without significant limitations of activity. The amount of damage done to the joint prior to surgery will determine how much arthritis will develop. Many dogs do not require pain medication after surgery. Depending on the degree of arthritis, some patients may require medication on an "as needed" to "regular" basis. Full recovery may take as long as 6 to 8 months. Many animals may benefit from the use of a chondroitin sulfate-glucosamine combination. This medication will be discussed at the time of your initial appointment.

What are the complications or risks associated with Triple Pelvic Osteotomy?

- Based on our selection criteria, the overall complication rate for dogs that undergo TPO is very low (less than 5%). The most common complications are minor superficial infection and seroma; rare complications include implant loosening or breakage, nerve damage and bone infections. The risk of implant failure is significantly reduced if there is strict adherence to the post-operative care protocol.
- With any surgical procedure there are risks associated with anesthesia. Prior to anesthesia, your pet will be evaluated by the surgeon and anesthesia service to assess risks and make recommendations to reduce the risk as much as possible. Fortunately, most patients with hip disease are otherwise healthy and anesthetic complications are rare. Mild complications associated with the surgical procedure include post-operative bleeding, bruising, reaction to suture material, seroma formation, and superficial infections.
- If you feel your pet has developed post-operative complications please contact the resident on duty, or one of the orthopedic service coordinators.
- It is important to note the VMTH is not financially responsible for complications that may occur following surgery unless the complication is related to an error in administering the procedure.

What post-operative care is required after Triple Pelvic Osteotomy?

Your pet's strict confinement for 8 weeks following the procedure is extremely important for successful recovery. Your pet should be confined to a small space (e.g. crate or small room) and should only be allowed outside on a leash for 5 to 10 minutes to urinate or defecate. Your pet should be kept separate from other pets in the house and should not be allowed to jump in and out of vehicles. Your pet should not jump on or off furniture or walk on slippery surfaces. If this is necessary, then a towel used as a sling under the abdomen can help prevent serious injury. Your pet should not be using stairs without towel support for at least 8 weeks. After the 6-8 week recheck exam, your pet may be allowed on short leash walks. These initially may be as little as 10

minutes, gradually increasing every 2 weeks, so that 12 weeks post surgery your pet should be able to walk on the leash for 30 minutes. You should only increase the level of exercise if your pet is doing well at the previous level.

How many follow-up appointments are required during the post-operative rehabilitation?

- Cases will vary, but general recommendations are for suture removal 10-14 days after surgery; this may be performed at the VMTH or by your regular veterinarian. To assess progression of healing, we recommend one additional recheck examination at the VMTH 4 weeks after surgery. This assumes that all is going well. If the dog is not using the leg well or there are any other problems, further recheck examinations may be required.
- If the second hip needs to be operated, then it is often scheduled at the 4-week recheck exam. This assumes that your pet is weight bearing well on the previously operated side and that healing is considered adequate based on the recheck radiographs.
- Please schedule your recheck appointment(s) before leaving the clinic, if at all possible, as the Orthopedic Surgery Service is often booked several weeks in advance.

What are the anticipated surgical and follow-up costs for hip replacement?

See the [Orthopedic Procedures Price List](#)

Prices subject to change without notice.

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