

Physiotherapy and Rehabilitation Guide following fracture repair surgery

1 Introduction

So your pet has just had fracture repair surgery and is in recovery mode. What steps can you take to improve their healing, accelerate their return to normal activity and reduce their discomfort following the procedure? Thankfully there are many exercises and treatments we can do, immediately following surgery that can help your pet.

While the exercises in this guide show us what “gold standard” aftercare looks like, we recognise that this is not always possible or practical, due to either patient or owner factors. So don't worry too much if you think you won't be able to do all of the things suggested here, your pet should still recover well from the surgery and get back to normal.

As a general rule, nothing that we do during physiotherapy should cause pain so start gently and with short sessions and build it up over time if your pet tolerates it. Treats and verbal encouragement will help keep your pet compliant.

2 Immediately post-op - Days 1-7

This can be the hardest time to manage your pet as they may still be sore following the surgery and have limited mobility. It is important to give all pain medications prescribed to ensure that your pet is as comfortable as possible, be sure to contact your vet if your pet is still very sore despite these medications.

While it's a bit early to do too much physio, we can apply a cold compress (ice packed wrapped in a cloth) to the wound if your pet allows it. This can be helpful at reducing pain, inflammation and swelling. Do this for 5-10 minutes 3 times a day for the first 3 days.

As regards exercise, we don't want patients going on walks at this stage- just outside to the toilet, always on the lead, 3-5 times a day. At all other times, your pet should be controlled in a crate, pen or small room.

We should be starting to see an improvement in lameness by this stage, with most dogs using the leg by 10 days post-op. We still don't want to start doing any walks but can start with some massage and gentle exercises to improve the Range of Motion (ROM) in the joints above and below the fracture.

Links to videos of all exercises are available on our website, in the resources section.

<https://www.northwestorthovet.com/pet-owners>

We can start to move from a cold pack to using a warm pack just before we do the physiotherapy exercises. This can warm up the joint, improve blood flow to the area and make things a little more comfortable during the exercises. Just make sure the pack isn't too warm for your pet's skin.

Massage

Massaging your dog's leg is important to help relax the muscles prior to performing the exercises for rehabilitation. Lay your pet on his/her side on a comfortable surface with the surgical limb up. Target the muscles above and below the fracture site. Take care not to press too close to the fracture as this may still be painful at this time

Start the massage by pressing down on the muscles with the heel of your palm. You should not move your hand over the skin, but instead press down hard enough to move the skin over the tissues below. See the video links for a more detailed description. Do this for 5 minutes 3 times a day before going on the Passive Range of Motion exercises.

Passive Range of Motion Exercises

Passive Range of Motion – or PROM – is the range of motion of a joint, performed without the muscle contracting, using an external force (your hands). This is essentially where your dog lies down, and you move their legs for them. This helps improve flexibility and increases the production of lubricating joint fluid. With your pet lying on their side, flex and extend the affected limb several times, gently, until a little resistance is felt. Support the joint you are moving while doing this to prevent any twisting of the limb.

You can start with a short session, with plenty of treats and encouragement, and build up to 5-10 minutes 3 times a day.

By this stage your dog should be starting to use the leg better, you will have had the wound checked by your vet and once it has healed, we can begin to increase your pets exercise.

We should start walks on a short lead for 5 minutes 2-3 times a day. As each week passes, we can increase the length of these walks by 3 minutes per week so that by Week 8 we are doing 20 minute walks 2-3 times a day. Walks should be on relatively flat ground with good grip underneath and a speed that your pet is comfortable and using the leg.

If you find, as the walks get longer, that your pet becomes lame, then keep the walks shorter so that they are using the leg for the entire duration of the walk. Each pet is different so don't be disheartened if this is the case.

We can continue with the PROM exercises and massage as well as adding the following;

- Sit-to-stand exercises - This is essentially a “doggy squat”. The goal of this exercise is to encourage the patient to sit squarely and then rise from a sitting position using the affected limb to push off. Initially 3-5 repetitions should be performed. Work up to 20+ repetitions over time. You can do this twice daily. This is especially useful in fractures of the hindlimb.

- Three-legged stands - Have your pet stand squarely on a non-slip surface and then gently lift the leg off of the ground (not the surgical one) and hold for 5 – 10 seconds. For example if the front left leg was broken ,you would lift the front right leg. This encourages full weight bearing on the affected leg in a controlled and gentle manner.

- Figure of 8 walks - walking in Figure-of-eight patterns or weaving around obstacles helps to improve weight bearing and proprioception (knowledge of where your pets feet are in relation to their body).

- Walking up gentle slopes can increase the amount of weight your dog bears on their back legs and encourages full flexion and extension of the stifle.

- Cavaletti poles - setting up a series of small, low hurdles for your dog to walk slowly over can be a fun way to improve range of motion and proprioception. See the video for more details

Time post-surgery	Activity
<ul style="list-style-type: none"> 1-7 days 	<ul style="list-style-type: none"> Walks outside to toilet on a short lead Cold press on the affected area - 5 minutes 3 times a day
<ul style="list-style-type: none"> 1-2 weeks A consultation with your vet approx 10 days post op to check wound healing 	<ul style="list-style-type: none"> Walks outside to toilet on a short lead Heat pack applied to area prior to physiotherapy Massage - 5 min 3 times a day PROM exercise - 5 min 3 times a day
<ul style="list-style-type: none"> 2-8 weeks X-rays of the bone at 8 weeks to assess healing. 	<ul style="list-style-type: none"> Walks on a short lead, adding 3 minutes every week, 3 times a day. Continue with massage and PROM exercises Sit-to- stand - (start week 3) - 10-20 repetitions twice daily 3-Legged stands - (start week 4) 2-4 repetitions 3 times a day Figure of 8 walks - (week 4) 2 minutes once a day Gentle slope walks - (start week 5) 2-5 minutes twice daily
<ul style="list-style-type: none"> 8- 12 weeks 	<ul style="list-style-type: none"> Increase walks by 5 minutes a week until back to normal levels Start trotting on the lead Can start hydrotherapy where available No off lead running until 12 weeks

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Professional Help

While most of the exercises in this guide can be easily done at home, some patients will benefit from additional professional help. A qualified Veterinary Physiotherapist can be very helpful during your pet’s recovery from surgery. We recommend using the services of a physiotherapist registered with the International Association of Animal Therapists - a list of whom can be found on their website - <https://iaat.org.uk>