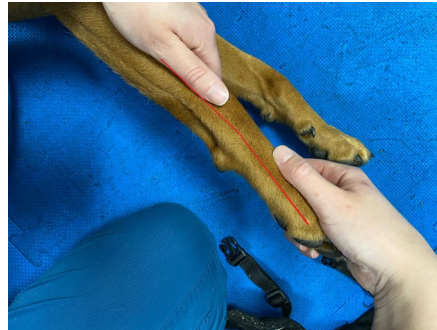


## Passive Range of Motion Techniques for Owners

Passive Range of Motion (PROM), is when we take a joint through its range of motion by guiding it with our hands. The movement must be done slowly and continuously and never pushed beyond the comfortable end range of the animal. Below we describe how to perform passive range of motion on each of the limb joints. As a general rule, you need to support above and below the joint, with one hand stabilising and the other guiding the movement. We recommend doing this 2-3 times daily with 5-10 reps per joint. The pictures below are a guide.

### **Carpus (Wrist)**

Place one hand above and one hand below the joint. Using the hand above to support, gently flex and extend the joint with the hand.



### **Elbow**

Place one hand on the inside of the elbow joint to support it and keep it nice and straight. Place the other hand around the radius (the bone below the elbow). Use this hand to gently guide the joint to flex and extend. It is difficult to isolate the elbow from the shoulder so you may get a degree of movement from the shoulder as well.



## Shoulder

The shoulder joint in a dog is a ball and socket joint, so there is a degree of rotation available within the joint. However, we want to focus on flexion and extension during our PROM here, so we need to keep the shoulder in the sagittal plane. Place one hand over the scapula (shoulder blade) and the other hand on the humerus (bone below the shoulder). In flexion, it is easiest to have your hand below the bone to gently push into flexion, then move your hand behind the humerus to push into extension. It is difficult to isolate the shoulder from the elbow, so you may get a degree of movement from the elbow also.



## Hock (Ankle)

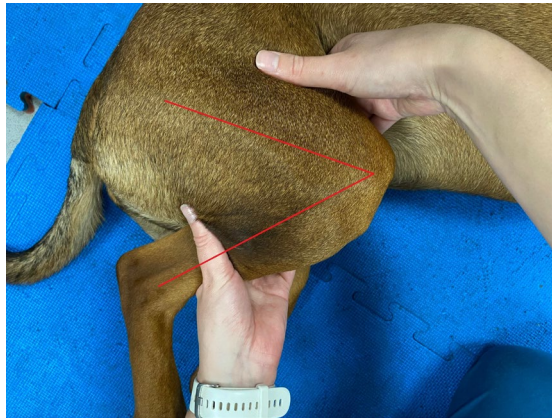
Support the lower limb and then just above the joint. Gently guide this into flexion and extension. You will need to keep the rest of the limb slightly flexed as there is an apparatus in the dogs hindlimb which means the hock joint moves in conjunction with the stifle, so you cannot isolate it completely.





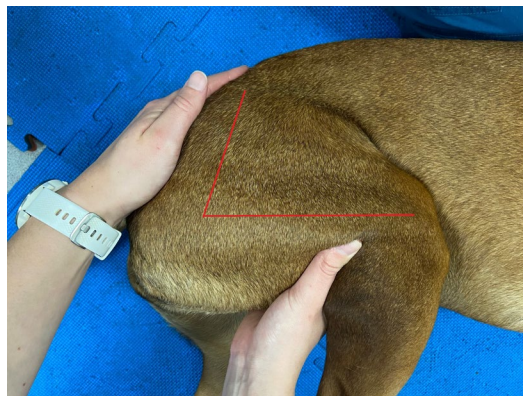
### Stifle (Knee)

Again, you will need to support above and below the joint. To flex the stifle, stabilise with your top hand on the femur (bone above the joint), then guide into flexion by pushing the Tibia (bone below) up. The same applies for extension, gently guiding the tibia back into extension.



### Hip

The hip joint is a ball and socket joint so there is a degree of rotation available in its range of motion. We want to focus on flexion and extension so try not to allow the hip to rotate outwards when you extend the joint. Support the pelvis with one hand, then guide the limb into flexion and back into extension as below.



### Standing PROM

Some dogs may not lie down nicely for these movements to be carried out. So we have outlined below how to take each limb into full flexion and extension to target all the limb joints in one fluid movement.

Essentially when performing standing PROM we are asking the dog to do a 3-legged stand as well as flex/extend all of the joints in the lifted limb, so please bear in mind how challenging this may be for some dogs. If your dog resists this movement then please stop.

### Forelimb

Stand on the opposite side of the dog to the limb you are targeting. To flex the limb, support the medial shoulder area and gently pick the leg up, supporting just below the wrist. Gently guide the limb upwards to create flexion and stop as soon as you feel resistance from your dog. If your dog tries to 'hop' out of this movement then you have flexed too high. To extend the limb you can use one hand to support under the abdomen or around the front of the chest area to the medial shoulder again. With your other hand, support the elbow and gently guide forward within your dogs comfortable range.



## Hindlimb

Again, stand on the opposite side of your dog to the limb you are targeting. With your supporting hand, reach under your dog and place your hand just under the knee joint. Your arm can then act as a support should the dog need it. Place the other hand just below the ankle joint and use both hands to guide the limb up into flexion. To extend the limb, do not pull with your lower hand, but instead gently push from just above the knee joint and use your other hand to support the lower limb.



PROM can be difficult or uncomfortable for a dog with sore joints or muscles, so if your dog exhibits any signs of being uncomfortable or resistant to these movements then please STOP!

At no point do we want to push a dog beyond its end range of motion, so stop the movement when you reach resistance and even a very small degree of flexion/extension can be beneficial as a therapeutic exercise.

If you have any questions or concerns please do not hesitate to contact us at Greenside and we will be happy to help.