



## FEATURE

WORDS Dr Helen Nicholson

### Animal Physiotherapy Services

While animal physiotherapy has been around for decades, it is still a relatively unheard of and unexplored recovery tool for many pet owners. Just like human physio, animal physiotherapy can help with a huge range of symptoms and conditions, providing great relief for all kinds of animals – from dogs and cats to lizards and bats – and ensuring they enjoy a great quality of life. Conditions mainly fall into the categories of muscular, orthopaedic, airways and neurological (an easy way to remember this is “Don’t M-O-A-N – see the Physio!”) but animal physiotherapists also appreciate the opportunity to improve the quality of life of animals with less common problems. This article will shine a light on some of the most prevalent problems we see, including arthritis, paralysis ticks, obesity and motor vehicle trauma. It will also outline popular physio techniques, such as hydrotherapy, massage, and agility dog rehabilitation, including a case study of a very special four-legged friend.

## What is Animal Physiotherapy?

Animal physiotherapy is based on the same scientific principles as rehabilitation for humans, but modifications are made for the facts that different species vary in their anatomy and biomechanics, and animals can’t speak to us in the same way that humans can.

When treating a dog, consideration is given to how the muscles, joints and nerves affect an individual’s movement and gentle techniques are applied to help make this movement more normal.

Techniques may include heat, ice, electrotherapy, massage, joint range of motion exercises, proprioceptive exercises, and other active exercises to help with strength, flexibility or balance. The use of “homework” exercises are vital to the success of physiotherapy, as an animal cannot be relied upon to remember to do their exercises in the same way a human patient can.

We prefer to use very gentle techniques with animals to make the experience more comfortable for them. This also makes it more comfortable for the physiotherapist, as the need to muzzle the dog is almost eliminated when the therapy is gentle. Gentle can still be very effective, though it all comes down to selecting the right techniques for the individual dog.

## Arthritis

Many veterinarians use the term “degenerative joint disease” to describe arthritis, which can be of two types: rheumatoid arthritis or osteoarthritis. Fortunately, rheumatoid arthritis is rare in dogs and most arthritic dogs that come for physio have osteoarthritis.

Osteoarthritis in dogs can develop in many ways. Some dogs develop hip dysplasia or elbow dysplasia at a young age and osteoarthritis may develop whilst these dogs are still quite young. Others may have been involved in a car

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accident and the fractures or joint dislocations received as a result of this trauma may quickly lead to arthritis, regardless of the dog’s age or previous health.

With arthritis becoming an increasingly common problem for dogs, a lot of work has gone into the advancement of veterinary care for this condition. Advances include new generation non-steroidal anti-inflammatory drugs, disease modifying drugs, therapeutic diets, diet supplements, and joint replacement techniques. Therefore, dogs with hip arthritis, for example, now have access to exactly the same joint replacement techniques used in humans, although the post-op physio for dogs and people with hip joint replacements is not exactly the same.



When working with people, one of the mottos of physiotherapy is: “use it or lose it”. This means that if an individual does not use their flexibility, they become stiffer. Likewise, if they do not make use of their muscles, the muscles will waste away and the individual will become weaker.

Extrapolating the principle of “use it or lose it” to dogs, the cycle of causality is that increased pain-free movement leads to greater participation in the dog’s favourite activities, which results in a better quality of life.

## Tick Poisoning

Hospital admissions due to tick poisoning are common along the Eastern seaboard of Australia and typically involve respiratory distress, paralysis, or a combination of both.

Physiotherapy has the potential to benefit not only the acute signs of tick poisoning, but also factors that may delay recovery, such as prolonged paralysis or chronic aspiration. One of the ways in which physios can assist vets with the management of tick poisoning is through a ‘CPAP’ machine.

These machines help to hold the airways open, so that the dog doesn't have to work so hard to breathe, and can also make a difference to 'brachycephalic' (short-faced) dogs who might otherwise have difficulty holding their airways open while recovering from general anaesthetic.

## Motor Vehicle Trauma

Dogs admitted after being hit by a motor vehicle may be recumbent due to any one of a multitude of problems, or combination of problems. Such problems include severe orthopaedic or neurologic injury, blood loss, respiratory disease or shock. Specific injuries may include fractures, peripheral nerve lesions and spinal cord injuries.

Physiotherapy for orthopaedic injuries may include direct treatment of the problem, including application of thermoplastic splinting. Physiotherapy might also include range of motion exercises for uninvolved joints in the same or other limbs, balance exercises to help prevent further injury whilst trying to ambulate with a cast, gait rehabilitation after the fracture has healed, and prevention or treatment of secondary complications including arthritis, muscle atrophy and joint range of motion.

## Obesity

Obesity is an increasingly common problem in pets and one that must be addressed for the health and safety of the dog and owner alike – obese dogs present an injury risk to owners trying to lift them, for example, and owners who regularly exercise with their dogs have the opportunity to improve their own fitness as well as the dog's. However, many people do not recognise their dogs are overweight because dogs do not carry weight in the same way as people do – many people think that because the dog's arms and legs are thin, that the dog is of a suitable weight.

Animal physiotherapists are well-trained in animal nutrition so they can advise on appropriately reducing the caloric density of food given to the dog and can recommend a daily feeding dose based on calculation of the dog's daily energy requirement.

An important consideration is that it is one thing to tell an owner to exercise their dog more, but it is another thing altogether to support them in this venture. For example, muscles surrounding a dog's freshly repaired cruciate ligament may not be strong enough to support their stifle during the long bursts of exercise required to help lose weight. Alternatively, an arthritic dog may be in too much pain to exercise adequately. An appropriate rehabilitation program is a valuable adjunct to a weight-loss program in order to maximise the chances of success.

An additional benefit of seeing a physiotherapist for your dog's arthritis is that we can also treat your own aches and pains that might otherwise limit your ability to help your dog – in Australia, all animal physiotherapists have to be qualified people physios before they are allowed to undertake further study of other species.

## Hydrotherapy

The benefits of hydrotherapy for dogs include:

- Reduced load on painful or healing body parts
- Exercise can be commenced earlier in the rehabilitation process than on land, and with less muscle activation required and less load on joints
- Provision of extra support to joints, with resultant reduction in the prospect of injury to ligaments, tendons and muscles

- Continuation of exercise programs, even where land-based exercise is limited or contraindicated
- Facilitation of difficult movements via buoyancy
- Facilitation of strengthening via drag (the water's resistance of the dog's movement)
- Prevention of muscular atrophy
- Improvement in muscular bulk and strength
- Increased cardiovascular fitness and endurance
- Reduction in stiffness and improvement in joint range of motion
- Increased soft-tissue extensibility
- Facilitation of muscle tone normalisation - reduction of muscle spasm and increased tone of flaccid muscles
- Facilitation of a graduated progression towards more normal function
- Reduction of swelling via hydrostatic pressure (the pressure of the water, which is higher the deeper you go)
- Promotion of relaxation, especially in warm water
- Promotion of healing and other benefits of increased circulation.

There are many methods of giving dogs access to the benefits of hydrotherapy, including bathtubs, dams, rivers, pools and underwater treadmills, with due consideration made of the weather, cleanliness of the water and other safety considerations such as whether the dog has any open wounds.



Equipment for hydrotherapy may include a pole with a floating toy attached to encourage the dog to move during balance exercises, or free-floating toys to motivate dogs to swim or to reward them for participating in other active exercises. Buoyancy vests are not only excellent safety devices for nervous or poor swimmers, they can reduce the work of swimming and help improve trunk control in dogs that might otherwise fatigue quickly (e.g. those with spinal injuries). Additionally, various weights and floats can be used to increase or decrease the difficulty of various hydrotherapy exercises.

### Tip

There is more to hydrotherapy than just letting your dog swim! If you want to increase your dog's cardiovascular fitness, then swimming can really help, but if you want to help reduce joint pain, for example, wading is a better choice, because the muscles that support the joints only work against gravity and under the load of body weight.





## FEATURE



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### Massage

Massage has been used for centuries for its beneficial effects to humans on muscle tissue, pain and circulation and is now being used on dogs with a variety of problems. Examples include arthritic, athletic and obese dogs, who may at various times suffer muscle pain, swelling, stress or confinement.

When massaging, it is important to always work towards the heart, to help circulation and lymphatic drainage. As such, if you are massaging a dog's back leg, always work from the toes towards the hip. For the front leg, always work from the toes towards the shoulder. When massaging the back or the abdomen, it is customary to start at the tail end and work towards the head, even though this tends to result in long-haired breeds sporting somewhat of a Mohawk afterwards!

### Agility dog rehabilitation

Agility is an exciting sport for dogs and handlers alike, hence its increasing popularity. Just as human Olympic athletes wouldn't enter an event without a good strength and flexibility program in training or a thorough warm up before the big race, nor should the elite canine athlete.

Dogs performing in agility competitions are certainly elite athletes and whilst some injuries are obvious and need immediate veterinary care, others may be milder and the only sign of a problem may be a seemingly inexplicable reduction in performance. What can be done to try to prevent this kind of injury in the first place? While luck does always play a part, the answer largely lies in a thorough strength, flexibility, warm up and recovery program.

### Case Study: 'Chance'

Chance is a gung-ho Border Collie (see pictured). She loves agility, diving, flyball and does nothing at half speed! Chance's mum was horrified when, at the age of 5 years and 11 months, she injured her first cruciate ligament (September 2013). At her regular vet's recommendation, the surgery was done by Dr David Lidbetter, at Animal Orthopaedic Specialists and post-surgery she consulted with Animal Physiotherapy Services. After the initial physiotherapy assessment, Chance was given a customised program and exercises to practise daily. Chance's devoted owner carried these out religiously every day and kept a record of daily exercises. Her physiotherapists saw her regularly to evaluate her body and fitness so they could adjust the exercises accordingly. Chance resumed doing agility and flyball, but in June 2014 she injured the other cruciate. Further surgery ensued, and Chance followed the same recovery procedure as for the previous surgery.

Being an agility and performance dog, it was important for Chance to get and follow the best possible advice from professionals. During Chance's post-op recovery second time around, her mum had to travel unexpectedly to the UK - prior to which she had been performing daily exercises as recommended by Animal Physiotherapy Services. Before her mum went overseas, Chance had been walking without limping. But after just 1 week away, Chance's mum came home to discover she was limping again! The physio exercises were therefore resumed and her limping disappeared within a matter of days. Post-surgery physiotherapy has been a blessing for Chance, and she is now back into her agility sports like nothing ever happened.

*For over 15 years, Animal Physiotherapy Services has been the service of choice for many of the top veterinarians in Australia and one of the world leaders in qualified Animal Physiotherapy. Practice heads, Helen and Naomi, have each spent 9 years at university earning this honour, and are committed to developing the profession by teaching in Australia and overseas. Helen and Naomi have just opened their new facility "Spring Forward Family Centre" in Western Sydney - a multidisciplinary therapy centre for the whole family (including the furkids).*

