



FEATURE

Hydrotherapy

and how it can benefit your dog

Hydrotherapy literally means “water therapy”. It is an excellent tool that we are trained to use as qualified physiotherapists for a wide range of conditions such as arthritis, poor mobility, bone, joint and muscle injuries, spinal injuries, plus some brain and nerve conditions.

The benefits of hydrotherapy for dogs include:

- Reduced load weight on painful or healing body parts from body weight;
- Exercise can be started earlier in the rehabilitation process than on land, with less muscle effort required and less weight on joints;
- Water provides extra support to joints, reducing the chance of injury to ligaments, tendons and muscles;
- Option to still carry out an exercise program where land-based exercise is limited or contraindicated;
- Buoyancy assists the dog with difficult movements;
- The use of drag (the water’s resistance to the dog’s movement) to strengthen muscles;
- Prevention of muscle wastage;
- Improvement in muscular bulk and strength;
- Increased cardiovascular fitness and endurance;
- Reduction in stiffness and improvement in joint range of motion;
- Increased soft-tissue length;
- Reduction of any muscle spasm and activation of weak muscles;
- Allows a gradual progression towards more normal function;
- Reduces swelling via hydrostatic pressure (the pressure of the water) which is higher the deeper you go;
- Promotion of relaxation, especially in warm water. A relaxed dog is a happier dog who is likely experiencing less pain;
- Promotion of healing and lots of other benefits of increased circulation.

Hydrotherapy is NOT swimming - there’s a lot more science to it than that. In fact, soon after injury or surgery we often avoid swimming as it puts joints through a large range of movement without activating the muscles that stabilise and protect them. In an injured dog, this may actually cause further pain and compensatory muscle spasm. Instead, hydrotherapy is most beneficial when static or dynamic exercises are undertaken with the feet in contact with the ground. Wading is the easiest way for most dogs to start; it allows your dog to practice the movements for their favourite activity (a W-A-L-K!) and start strengthening the appropriate muscles straight away. This is why we LOVE the underwater treadmill (UWTM) even more than a hydrotherapy pool. Both have their pros and cons; however, at Whole Family Health, we have a UWTM due to the ability to control, adjust, add and remove certain factors that are either difficult or impossible in a pool.

Sometimes we get the dogs to swim in the UWTM, however, usually they are bearing some weight through some or all limbs.



Above: 13-year-old Mia who had a back leg amputated 6 weeks ago trying out hydrotherapy for the first time.



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In the UWTM we can control:

- water depth and therefore the amount of hydrostatic pressure on their limbs,
- degree of weight the animal bears through particular joints,
- speed the water flows over the body and therefore the amount of effort needed to push against the resistance,
- the amount of support they need to feel safe and so have less or no anxiety,
- we can clearly see what their limb movements are under the water using the side windows,
- water temperature, allowing soothing heat for dogs with stiff or uncomfortable joints and muscles, or ensuring it's cooler for the athletic dogs doing cardiovascular work,
- precisely how much exercise of each type is done, as the UWTM computer measures distance, speed, time, incline and water depth. This is great to use to incrementally increase various factors and progress the animal's treatment.

Hydrotherapy Pool

For dogs that love swimming, especially with others, a hydrotherapy pool is great fun. They are usually smaller and shallower than what a human would use. Hydrotherapy is effective for dogs that need to increase general strength or stamina, be able to move joints more freely without their body weight through them or lose weight.

However, unless it's extremely shallow at one end, the dog is unable to have their feet on the ground at any point. This removes the benefit of weight-bearing and makes some dogs anxious because they can't touch the bottom. Unless they're great swimmers, float vests must be used which affects buoyancy, resistance and pressure on the body, so this has to be factored into the therapist's calculations and treatment.



Above: The underwater treadmill (UWTM) at Whole Family Health

Did you know?

- A dog standing in water up to the hip is only bearing 38% of their body weight through their legs.
- Fat floats on water – the more fat in a dog's body, the easier it is for them to float. The leaner and more muscular a dog is, the harder it is to float.
- When wading in a pool at a temperature of 31°C, a human in waist-deep water needs to walk at just one-third of the speed of walking on land to expend a similar amount of energy. Alternatively, the energy expenditure of a human swimming is about four times that of running the same distance. We can apply these figures somewhat to dogs, so this gives you an idea of how much work they're doing whilst in the water

Precautions in Hydrotherapy

1. Does your pet like water? If your pet shivers in dread at bathtime, introducing water exercises at a time when they are injured, stressed or disabled may end in injury and disaster. If this sounds like your pet, please discuss your case with one of our physiotherapists before going ahead.
2. Hygiene. Your pet should NOT undertake hydrotherapy if:
 - it has been less than 3 weeks since they had surgery
 - they have an open wound anywhere on their body
 - they are incontinent (either urine or number twos)
3. Does your pet need assistance in the water? Many pets can't manage water exercises by themselves at first. Simply putting them in the bath or pool at home, or even the river or sea, can be very unsafe if they're injured or scared. We always err on the side of safety and often use floats or life jackets.



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Wading Program

Below, we've outlined a wading program so you can get the best results from hydrotherapy for your best friend. Your rehabilitation program will be even more effective if this is supplemented with individual water and land-based exercises prescribed by one of our physiotherapists.

You can try hydrotherapy for yourself, by wading your dog in water (literally walking through shallow water - a bit like us going for a paddle in the sea) that comes up to hip height, 2-4cm below the base of their tail.

- **DAY 1** – wade for one minute; get out of the water and rest or walk slowly for one minute on land, watching carefully for any signs of deterioration (increased lameness, stiffness, dragging on the lead). If there are no signs of deterioration, perform a second repetition of one-minute wading, before getting back out of the water and resting for one minute on land again, watching carefully for any increased lameness, pain, etc. Only if there are no signs of deterioration, a third repetition of one-minute wading may be performed.
- **DAY 2** – provided no signs of deterioration were noticed on the evening of Day 1 and the dog did not wake any worse than normal on the morning of Day 2, repeat the Day 1 program of three repetitions of one-minute wades with one-minute land-walks between to check for signs of deterioration. Continue to check for signs of deterioration throughout the rest of the day.
- **DAY 3** – again, provided there are no signs of deterioration, either in the evening of Day 2 or the morning of Day 3, repeat the Day 1 program of three repetitions of one-minute wades with one-minute landwalks in between, observing closely for any signs of increased lameness, stiffness, pain, or dragging on the lead.
- **Day 4** – from Day 4 onwards, increase wading by one repetition of one-minute wading per session, always land-walking for one-minute between wades to check for signs of deterioration.

When your dog can do ten minutes of wading, we recommend adding more complex exercises, if they haven't already been introduced – just ask one of our physios for advice. Wading in water of different heights will target different muscle groups and achieve different goals, however, if you have not had a physiotherapy consultation, it is safest to wade your dog in water that comes up to hip height (2-4cm below the base of their tail). To optimise your pet's rehabilitation, please come to see us at Whole Family Health so that we can develop an individualised program.

Written by Dr Helen Nicholson, PhD Animal Physiotherapy

Animal Physio at Whole Family Health

We are all about a pet living their best life. Dr Helen Nicholson has a PhD in Animal Physiotherapy and is a world-leading expert in a wide range of modalities such as **laser treatment, hyperbaric oxygen therapy, underwater treadmill, wheelchair fitting, exercise and conditioning programs, rehabilitation, massage and manual therapy.**

Emma Duffy has an Honours degree in Physiotherapy and over 20 years of experience in the field. She has trained in animal physiotherapy techniques, hydrotherapy, acupuncture and canine massage, and works closely with Dr Nicholson. We are registered with AHPRA (Australian Health Practitioner Regulation Agency) and fully insured.

Contact: theteam@wholefamilyhealth.com.au or (02) 9833 3363 if you have questions or you'd like to discuss a case. We're based in St Mary's NSW, however, we do Zoom consultations. See our videos on www.wholefamilyhealth.com.au and Facebook/Instagram.

Image (right): Timon the young Mastiff practising weight-bearing following hip surgery

