

AQUATICS

BENEFITS OF HYDROTHERAPY:

- ◆ **WARMTH** of the water (29° – 32° C) helps relax muscles, decrease pain and muscle spasms, and increase range of motion.
- ◆ **HYDROSTATIC PRESSURE** of the water reduces swelling by creating a perpendicular pressure in all direction to the body and limbs, minimizing or resolving edema in distal parts of the body during exercise.
- ◆ **RESISTANCE** of the water promotes maximum muscle movement and increased range of motion with minimum pain. It also provides for a harder work out as heart rate and oxygen consumption can be greater. Add turbulence (via water jets) and the exercise is more challenging yet!
- ◆ **BOUYANCY** of the water decreases the concussion of bones and joints during exercise. It also helps to provide assistance in the animal with weakness and poorer balance and co-ordination. (Filling the Underwater Treadmill with water to the level of the greater trochanter can unload body weight up to 60%).

INDICATIONS FOR HYDROTHERAPY:

- Subacute or chronic soft tissue injuries
- Osteoarthritis
- Post-operative fractures when stable
- Post-operative: CCL, FHA, total joint replacement, TPO, etc
- General muscle weakness
- Neurologic conditions (weakness, ataxia, decreased conditions)
- A 'down' animal
- General muscular strengthening and aerobic conditioning
- Weight loss & weight management

CONTRAINDICATIONS FOR HYDROTHERAPY

- Cardiac dysfunction
- Respiratory dysfunction
- Danger of bleeding or hemorrhage
- Surface infections
- Incontinence or diarrhea
- Open wounds, open incisions, draining incisions or wounds (this refers to hydrotherapy as an exercise modality as opposed to a treatment for the wound)

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CAUTIONS FOR HYDROTHERAPY

- Risk of injury due to stress or uncontrolled thrashing

NOTES

- All animals should be supervised in the water at all times
- Floatation devices designed for dogs should be used in neurologic or physically challenged animals
- Start your water program by beginning with short duration and slow speed. Progressing as the animal is able. (Remember also in geriatric clients, that their bodies require a longer time to adapt and hence need to be progressed slower than a younger animal.)

FEATURES OF MOST UNDERWATER TREADMILL UNITS:

- Easy access to exercise chamber (particularly for animals with difficulty walking).
- Clear doors and windows for excellent viewing (exercise chamber also visible to clients and visitors from waiting area).
- Water automatically heated, treated, and filtered. Water quality is checked and recorded regularly.
- Water height regulated to accommodate different breeds and adjust for weight bearing.
- Adjustable treadmill speed, perhaps incline, and resistance (with the use of water jets).
- Digital display for treadmill speed, time, and distance.

DEEP WATER SWIMMING

- Enables the patient to work on AROM (active range of motion), muscle strength and cardiovascular condition in a fully non-weight bearing and non-impact setting.
- Utilizes all muscle groups reciprocally and against resistance all movement directions
- This kind of water therapy seems to stimulate neurological pathways and the neurological patient may show some active movement & ROM when introduced to swimming.
- Some dogs tend to get frustrated or unmotivated in a stationary swimming unit
- Small dogs can tolerate stationary swimming better than larger breeds

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TECHNIQUES TO UTILIZE IN THE POOL

- Manual stimulation to the pad of the foot helps to facilitate active movement.
- PNF patterns can be used to encourage return of sensory and motor functioning
- Putting two dogs in the pool can motivate them to move more
- Warmer water (80 – 83degrees) is good for relaxing muscles and easing pain, thus better for arthritic conditions to promote ROM or for massage
- Cooler water allows dogs to work harder without the risk of overheating
- Entrance and exit consideration:
 - lifting an unfamiliar dog who's scared, painful or stressed can lead to injury for both the therapist or patient
 - stairs can potentially be dangerous due to depth perception when getting in or out and the inclination to jump out
 - air lifts will lift the animal off the ground and then into the water which can be very alarming and stressful for the animal
 - a platform lift has many perceived advantages such as having the ability to be at ground level when the dog approaches, it can be lowered into the water to a depth that is shoulder height and suitable to start swimming and it serves as a resting spot during breaks while in the water
- Life jackets are well utilized to assist in floatation as well as a handle for the therapist to use, thus allow for the therapist to focus on limb movement.
- Booties can also be incorporated to increase swimming resistance or a water wing on a limb to increase flexion of that limb or increase the weight bearing time on the contralateral limb.