

Physical Therapy in Canine Rehabilitation

By Janet D. Collins

Physical therapy (PT) for animals: A new and exploding field of treatment for injured pets, principally dogs. Just as in humans, PT can have amazing results, giving the animals a new lease on life, as Jackie Woelz, MS, PT, the founding therapist for UC Davis School of Veterinary Medicine Physical Rehabilitation Service would happily tell you.



Jackie worked as a licensed human physical therapist for twelve years. But, her love of animals, coupled with her interest in physical rehabilitation led her to adapt her career to one of helping animals. Since there are no Masters degree programs in the US for animal physical therapist, she started by studying animal anatomy and physiology. From that work she undertook to translate her extensive knowledge of human PT protocols to animal anatomy. Jackie was one of the driving forces behind opening the doors of the UC Davis Veterinary School Physical Rehabilitation unit (as it is officially called) in 2004 – still one of only about 3 veterinary schools in the US to have such a unit.

Physical therapy is all about regaining functional ability. Jackie points out that while the medical and veterinary professions deal primarily with pathology, the focus in rehab is on minimizing or reversing functional impairment. And, in the veterinary profession the need for physical therapy services has turned out to be even greater than first thought. Jackie's patients include injured working or performance dogs, such as police dogs, herding dogs, search and rescue dogs, agility dogs and companion animals. She notes that not only injured animals, but also ones with gait abnormalities, spinal cord injuries (often seen in long backed dogs) and geriatric conditions also benefit from treatment.



Jackie says that animal conditions which can be helped are very much the same as seen in human medicine and she can tick off an amazing array of such conditions – post orthopedic or neurosurgery; pain; inflammation and swelling; critical care recovery; soft tissue injury; joint injury; gait abnormality; degenerative joint disease (arthritis); overuse injuries; geriatric conditions and performance issues for animal athletes. She goes on to point out that the animal benefits parallel those seen in human medicine such as improved flexibility and improved postural control and balance. And, the bonus is that it all tends to have a positive psychological effect on both patient and owner.

UC Davis Veterinary School's PT unit works hand in glove with the animal's veterinarian. Treatment starts with a referral, and no animal is treated without a complete record of its medical history. Jackie says communications with the referring doctor is a key part of her responsibility. These doctors not only receive calls or reports after each treatment but are also called if anything out of the ordinary occurs. She says staying in touch is key.



The first step is to tailor a program specific to each patient's needs. For some the process is short, perhaps only two visits. For others it could be as much as three visits per week for three months. Sessions generally run an hour, but some cases require only thirty minutes. Progress is documented after every visit and all patients get homework consisting of exercises and things to do between visits.

All sessions are meant to be pain free. Ice is sometimes used to prevent pain. Special care is always taken during the tissue healing and bone healing process. The basic approach is: be gentle – don't force, don't restrain. Instead encourage and use guided control. As Jackie says, "We want happy patients always wanting to return." In fact, some animal patients, just like human patients, are downright eager to return.



The equipment used would impress many human clinics. Jackie proudly says 99% of the equipment and technology come directly from human physical therapy. The underwater treadmill, which looks somewhat like the world's biggest aquarium, is the kind that's been used by humans for years. But this one has a better filtering system to accommodate animal hair. This hydrotherapy unit, bearing up to 60% of the animal's weight, allows them to build up strength while protecting their joints as they walk or swim. Physio balls (balls flattened slightly in the middle) are used to help an animal regain a sense of standing and balance. A mechanical lift with an abdominal sling is used to support an animal's weight allowing therapists to do such things as move the patient's legs to refamiliarize a damaged nervous system with taking a step and then walking. But, even with such wonderful equipment, Jackie believes that the most important tools used are the physical therapist's hands and eyes.



One of Jackie's better-known patients, Taz, a seasoned police dog, has had first hand experience with those hands and most of this equipment. One day, scrambling over a chain-link fence in pursuit of an armed man, Taz's leg caught in the fence causing a nasty fall. The next day he collapsed, unable to use his hind legs. Shortly after surgery at UC Davis Veterinary Medical Teaching Hospital for a now-bulging disc that was pressing against his spleen and damaging the neural pathway to his hind legs, Taz and his K-9 handler/owner met Jackie and began the long road back to recovery. Today, after six months of physical therapy Taz has gone from having useless back legs to walking on his own: something his owner calls a miracle. Sometimes his hip is a little wobbly and at times his right back leg can give way, but his therapy isn't finished. The goal now for Taz, his owner and Jackie is stronger leg muscles, an easier walk and maybe even the ability to trot a little bit. After 6 years of dedicated work Taz is retired, enjoying life and the attention of his police partner's family.



Belle, a search and rescue Bloodhound, was diagnosed with arthritis of the hips and elbows. After two and a half months of walking on the underwater treadmill just a couple times a week, Belle was strong enough to finish her search and rescue training. Today, she's happily doing search and rescue work.

Orthotics (plastic form-fitting units resembling a cast) is another fascinating physical rehabilitation tool used by this clinic. Their basic purpose is to help stabilize a limb. The needs of the patient determine the length of time it's worn. Orthotics are fabricated by filling a cast wrap of a limb with plaster. Plastic is put around this cast in a vacuum-sealed box and the result is a beautiful custom fit orthotic. Hinges (articulating orthotic) are added when needed to provide desire flexibility.



Hogan, a Saint Bernard, has a problem with unstable hocks and he has been wearing an articulating orthotic for almost 3 years. It gives him side-to-side stability and the hinges allow him to bend in a normal fashion so that he can easily lie down, stand up and move in a normal way. On the other hand, Polo, a guide dog, needed his solid orthotic for only one month. A cancerous tumor on one of the main nerves of his front leg left him unable to use the leg below the elbow. His orthotic got his leg in the proper position and allowed for follow up walking on the underwater treadmill.



Jackie is pleased that most dogs return to a pretty normal life when treatment is concluded. Some return to a completely full life but, just as it is with people, some need to have activity limitations. Jackie explains for example that after hip surgery a dog can hike, swim and play ball in moderation, but there's no jumping in and out of the car, no jumping on the bed and no rough-housing with other dogs.

She finds it interesting and rewarding that animals get better faster than people. She says they are more compliant patients, more positive and always arrive on time or early (unlike some of their human counterparts). It has also been her experience that the owners keep up with the PT program and many continue to keep in touch long after the program has ended. For Jackie, that's great because, as she says, some patients like the ones with neurological problems can continue to make progress for 6 months to a year or longer.

Animal physical therapy, the new, exciting and growing field where Jackie believes, “We can really make a difference. We are providing better care for injured animals and we will be able to document long term outcomes.” She and UC Davis School of Veterinary Medicine are very proud to be on the leading edge of this whole new field of animal care.

