

Physical Therapy for Horses

New treatments stimulate healing and get injured horses back on their feet without surgery.

Equine Physical Therapy, a new service at UC Davis, engages specialized equipment and procedures from human medicine to treat horses recovering from surgery or injury.

The centerpiece of the physical therapy system at the Veterinary Medical Teaching Hospital is a unique unit that delivers high pressure pulses of acoustic wave energy to injured tendons, ligaments and bones. The process, known as “extracorporeal shock wave therapy” (ESWT), is used in human medicine to break up kidney stones without surgery (a procedure known as lithotripsy).

The ESWT unit is coupled with ultrasonographic technology that enables its operator to visualize the exact region of acoustic stimulation.

Jack Snyder, chief of equine lameness and surgery at the School of Veterinary Medicine, says, “This is the only system in North America that can deliver a high level of energy to an unanesthetized, standing horse—it has the capability to promote healing and provide acute pain relief for deep lesions.”

Dr. Snyder says, “The results are encouraging. We are seeing ultrasound evidence that healing time for soft tissue injuries is reduced, in some cases up to 50 percent, after treatment with acoustic wave energy versus surgery.” The therapy is also bringing about good results in

the repair of stress fractures, a particular problem in race horses. “The good news for horses with stress fractures,” says Dr. Snyder, “is that the fractures are healing at least as fast as if they had surgery, and now we can avoid putting the horses under general anesthesia.”

The UC Davis clinicians are also using other specialty technologies to promote healing at the cellular level with less reliance on invasive procedures or drugs. In addition to ESWT, treatments such as photon therapy (therapeutic laser), electromagnetic systems and therapeutic ultrasound ease pain—animals can resume mild activity during recovery without the complications of long confinement.

Veterinary researchers have begun to formally evaluate these tools, which Dr. Snyder says, “offer huge potential to expand our knowledge of rehabilitation for the sport horse.”

For more news about advances in veterinary medicine, visit the UC Davis School of Veterinary Medicine Web site (<http://www.vetmed.ucdavis.edu>).



Electromagnetic impulses for systemic anti-inflammatory pain relief are delivered by an apparatus contained in the horse blanket. The electromagnetic field, which feels warm and pleasant to a human, says animal health technician Chris Macri, also stimulates endorphin release. The blanket might be applied once or twice a day for half an hour to treat a sore back, or for 20 minutes to decrease inflammation in the tendon area.



Extracorporeal shock wave therapy (ESWT) promotes healing and provides acute pain relief for deep lesions. Electromagnetic pulses are applied to the injured leg of a competition horse by sliding a probe over the surface of the leg. Horses that have been lame as long as two or three years are able to recover, and in many cases, healing and rehabilitation time has been decreased by one-third to one-half.



Acoustic wave energy is delivered in pulses to the injured suspensory ligament of an international grand-prix stallion during extracorporeal shock wave therapy (ESWT). Dr. Jack Snyder is pictured above with animal health technician Jaymi Rose and private practitioner Karen Blumenshine, DVM.



The area of stimulation is visualized on a monitor—crosshairs superimposed on an ultrasonogram indicate exactly where ESWT pulses are being delivered.



A former world-class equine athlete was referred to the Veterinary Medical Teaching Hospital following a nerve injury. The mare was paralyzed in the right foreleg and unable to stand. As a result of physical therapy while suspended for several weeks in a specialized equine sling, the mare was able to walk without having surgery, and while under treatment, delivered a healthy foal. Therapy with electrical stimulation also helped the mare regain lost muscle mass in the right shoulder.



Southern California Service Helps Solve Problem Behavior in Animals

Animals are sometimes referred to the behavior clinic showing very strange and inexplicable problems. Or they react with great fear to things that humans take for granted.

Dogs, for instance, can be afraid of pager noises, camera lens noises, jet aircraft and even hot air balloons.

Pat Melese, chief of the UC Veterinary Medical Center (UCVMC) Behavior Service in San Diego, says “We see about three dogs to one cat in a wide range of cases including aggression, separation anxiety, fearfulness or noise phobias.”

“The goal is not to be a lion tamer, but to carry out an intellectual, evaluative process and recommend a course of action.”

Dr. Melese, who has been a behaviorist for 14 years, says, “Most of the cases involving dogs are problems of aggression toward other dogs or toward people. We see some aggressive cats, but mostly cats come in because of elimination problems in the home.”

One cat reacted to his own reflection—he became aroused and aggressive in a room with mirrors—and was a danger to his owner. Dr. Melese had the owner bring a mirror to the exam room, but the cat totally ignored it!

Once the behavior was shown to be specific to the home environment, an investigation brought out the reason for the cat’s aggression—he associated stray cats viewed outside with mirrors inside the room. The owner was able to learn handling techniques that could calm the cat down.

“A behavior may appear to be very strange,” says Dr. Melese. “Treating such a case sometimes requires think-



Becky Spach

Nikko, a family Akita, reacts to noises such as rain and a home sprinkler system by destroying parts of the house. Patrick Melese, chief veterinarian of the Behavior Service, is working with Nikko, who is on a “sit” command with the help of a halter, to help the dog focus. Nikko’s owner is learning how to direct the dog’s attention in order to implement behavior modification steps.

ing like Sherlock Holmes—first you have to solve a mystery of domestic animal behavior in residential quarters. You take a careful history and begin to gather clues to determine the likely cause of the behavior.” Lab work also may be indicated to rule out medical problems.

“The goal,” says Dr. Melese, “is not to be a lion tamer, but to carry out an intellectual, evaluative process and recommend a course of action.”

Treatment requires a bit of counselling—which is not a normal part of the veterinary curriculum—to get a family system to alter its behavior in order to change what happens to the pet. People have to be motivated to consider making changes in how they interact with their pet in order to teach the pet new behaviors.

Some families do quite well with their pet, considering that animals often develop behavior problems over a long period of time before they are brought in. Dr. Melese recommends

that pet owners talk to their veterinarian about a developing behavior problem or get a referral before the problem becomes severe.

Dr. Melese’s objective is to help people and their animals maintain strong bonds of friendship and affection for each other and to prevent pets from losing their homes due to problematic behaviors.

For more information about the UCVMC Behavior Service or to make an appointment, pet owners can call (858) 759-6837. The clinic is based in Rancho Santa Fe, located in north San Diego County, and patients are also seen at pet specialty centers in La Mesa and San Diego. The UCVMC is a joint venture between the UC Davis School of Veterinary Medicine and UC San Diego to better serve Southern California.

Behavior Service resident Laurie Bergman greets Midnight, a family cat whose problem behavior is elimination in places other than the litterbox.



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