Rehabilitation

In a broad sense, animal rehabilitation is repair of an injured animal and treatment for disabilities caused by a physical impairment. Optimal physical rehabilitation is intended to enhance and aid in the recovery of animals with injuries, long-term degenerative conditions, or recovering from surgical procedures. Patients at higher risk of complications or residual problems after injury or surgery may require rehabilitation. Animal rehabilitation is a complex field of veterinary medicine that requires an accurate assessment of the patient’s physical problems. Physical therapy procedures promote health and fitness and enhance the quality of life. The goal is to reduce and manage pain, to bring patients back to full health, and return them to their previous state.

The practice of rehabilitation in veterinary medicine requires the expertise of specialists in many disciplines of anatomy and physiology, including orthopedics (skeletal system), neurology (nervous system), mycology (muscular system), cardiology (cardiovascular system), biomechanics, and pain management. Veterinary rehabilitation services provide treatment of various types of issues, such as trauma (muscle, tendons, ligaments), orthopedic injury (bones, joints), neurological injury (peripheral nerves, spinal cord), osteoarthritis (aging), debilitating metabolic diseases (diabetes, hypothyroidism), obesity (overweight), and postoperative care following orthopedic surgery.

The benefits of rehabilitation for animal patients are:
- Patients become mobile after a severe orthopedic or neurologic injury.

Rehabilitation used to improve balance.

Underwater treadmill reduces the impact on the joints.
• Patients safely use a painful limb after an injury or surgery.
• Improve and prolong the quality of life of geriatric and arthritic patients.
• Achieve weight loss in overweight and obese animals.
• Manage acute and chronic pain.
• Increase fitness of athletic and working animals.
• Provide ambulatory assistance to patients who need ambulation carts (mobile support), orthotic devices (splints), or prostheses (limbs).

Clinical services include:
• Therapeutic exercise
  - Underwater treadmill
  - Land treadmill
  - Manual therapy
  - Theraball
• Massage therapy
• Stretch therapy
• Cold pack therapy
• Moist heat therapy
• Acupuncture
• Neuromuscular electrical stimulation
• Low-level laser therapy
• Therapeutic ultrasound
• Focused shockwave therapy
• Pulsed electromagnetic therapy
• Hyperbaric oxygen therapy
• Ambulation carts, orthotic devices, prostheses

Purposes of therapeutic exercises are:
• Theraball
  - To help with balance and strength
• Underwater treadmill
  - Low impact exercise
  - Reduces load on painful joints
  - Water pressure reduces swelling and edema (hydrotherapy)
  - Water resistance improves muscular and cardiovascular systems
  - Water float enables exercises
• Land treadmill
  - Encourages use of limbs
  - Reduces stress and pain
• Manual therapy
  - To mobilize joints

Low level laser therapy directs biostimulative energy to body cells. In turn the body cells convert it into chemical energy that promotes natural healing and pain relief. Pulsed neuromuscular electrical stimulation utilizes low-frequency currents to help relieve acute and chronic pain and help prevent muscle atrophy from orthopedic and neurological diseases. Acupuncture is the insertion of needles into defined acupoints in the body to treat pain.

Ambulation carts are devices designed to support limbs of non-ambulatory animals. Ambulation carts are custom fitted for patients to provide support during locomotion. Splints are orthotic devices used to protect an injured or disabled limb. Prostheses are internal or external devices used to replace missing limbs. Surgical implantation of internal devices is known as osseointegration. Patients and their caretakers must be trained to use these prosthetic devices to achieve the intended result.

References

Altanta Animal Rehabilitation & Fitness Hospital Website. http://atlantaanimalrehab.com/

Animal Rehabilitation & Wellness Hospital Website http://www.arwi.com/


California Animal Rehabilitation (CARE) Hospital Website http://www.calanimalrehab.com/

Questions

1. Define rehabilitation of animals.
2. Explain the knowledge and experience veterinarians should have to specialize in rehabilitation.
3. List the types of animal health issues that can benefit from rehabilitation.
4. List the benefits of rehabilitation for animal patients.
5. List the clinical services associated with rehabilitation.
6. Explain the purposes of therapeutic exercises.