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Rehabilitation strategies for musculoskeletal disorders in companion and sport animals.

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Introduction

Musculoskeletal disorders are a significant concern in both companion and sport animals, affecting their mobility, comfort, and quality of life. These conditions range from arthritis and tendon injuries to ligament tears and post-operative orthopedic complications. With the growing demand for enhanced animal welfare and performance, veterinary rehabilitation has emerged as a critical aspect of treatment and recovery in clinical practice [1].

Musculoskeletal disorders in animals can result from trauma, genetic predispositions, aging, or repetitive strain, particularly in sport animals such as racehorses and agility dogs. Common conditions include cranial cruciate ligament (CCL) injuries in dogs, osteoarthritis in older cats and dogs, and tendonitis in horses. These ailments often lead to pain, stiffness, decreased activity, and reduced performance, necessitating a tailored rehabilitation approach [2].

Veterinary rehabilitation, much like human physiotherapy, incorporates a range of non-invasive techniques designed to restore movement, improve function, and reduce pain. The primary goals include promoting healing, preserving joint flexibility, rebuilding muscle strength, and enhancing the animal's overall mobility. A thorough physical and orthopedic examination by a veterinarian or certified rehabilitation specialist is essential to determine the extent of injury and formulate an individualized treatment plan [3].

One of the core components of animal rehabilitation is therapeutic exercise. Controlled activities such as leash walking, balance board work, and strengthening routines help restore neuromuscular control and joint function. Exercises are introduced progressively, ensuring minimal stress to healing tissues while gradually rebuilding endurance and strength [4].

Hydrotherapy, particularly underwater treadmill therapy, is widely used in dogs and occasionally in horses. The buoyancy of water reduces weight-bearing stress on joints while providing resistance that promotes muscle development. It is especially beneficial in post-surgical recovery and for animals with degenerative joint disease, as it allows safe movement without overloading the musculoskeletal system [5].

Conclusion

In conclusion, rehabilitation strategies for musculoskeletal disorders in companion and sport animals represent a multidisciplinary and proactive approach to veterinary care. As the field continues to evolve with technological innovations and evidence-based techniques, animals benefit from improved mobility, comfort, and overall well-being. By integrating rehabilitation into standard treatment protocols, veterinarians can offer a higher standard of care and significantly improve outcomes for animals affected by musculoskeletal conditions.

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