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Animal physiotherapy in post-surgical recovery: Evidence-based techniques and outcomes.

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Introduction

Animal physiotherapy, also known as veterinary rehabilitation, has become an essential component in the post-surgical recovery of animals. As veterinary medicine advances and more complex surgical procedures are performed on companion and performance animals, the demand for effective rehabilitation techniques has grown. Physiotherapy not only aids in faster recovery but also helps restore function, improve mobility, and enhance the quality of life [1].

Post-surgical recovery in animals often involves managing pain, inflammation, and muscle atrophy while promoting healing of tissues and restoration of joint function. Without appropriate rehabilitation, animals are at risk of delayed healing, compensatory injuries, or permanent disability. This is especially true for surgeries involving the musculoskeletal or nervous systems, such as cranial cruciate ligament (CCL) repair, spinal surgery, or fracture fixation [2].

Manual therapy is one of the foundational physiotherapy techniques used in the early stages of recovery. This includes gentle massage, passive range-of-motion exercises, and joint mobilizations to maintain joint flexibility and reduce stiffness. These interventions help promote circulation, reduce edema, and prevent adhesions that could limit mobility [3].

As the healing progresses, therapeutic exercises become central to physiotherapy. These exercises are tailored to the animal's condition and involve controlled movements to strengthen muscles, improve coordination, and enhance proprioception. Techniques such as weight-shifting, walking over cavaletti poles, and sit-to-stand transitions are commonly used. For dogs recovering from orthopedic surgery, targeted strengthening of the hind limbs or core muscles is vital for restoring gait and function [4].

Hydrotherapy—the use of water-based exercises such as underwater treadmill walking or swimming—is widely used in post-surgical animal rehabilitation. The buoyancy of water reduces weight-bearing stress on joints while still allowing active movement. This is particularly effective for animals recovering from hip or knee surgery. Hydrotherapy improves cardiovascular fitness, muscle tone, and joint mobility while minimizing pain [5].

Conclusion

In conclusion, animal physiotherapy is a vital, evidence-based aspect of post-surgical care that significantly enhances recovery outcomes. Through a combination of manual therapies, exercise, hydrotherapy, and advanced modalities, veterinary rehabilitation supports the healing process and restores function. As the field of veterinary medicine continues to evolve, physiotherapy will play an even more prominent role in comprehensive patient care, benefiting animals and improving their quality of life after surgery.

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