

Injured or Disabled Pet? Design the Perfect Rehab Program

There are many things to consider when designing a rehab program for your injured or disabled dog, cat, horse, rabbit or other pet. Know the nine conditions for which rehabilitation therapy is a must and one of my favorite types of therapy that can ease pain and help injuries heal.

Analysis by Dr. Karen Shaw Becker

STORY AT-A-GLANCE

- Most animal rehabilitation therapists agree therapeutic exercise should be the foundation of every customized rehab program
- There are many things to consider when designing a rehab program for a veterinary patient, including the animal's age, injury, diagnosis and limitations, and the ability of the pet parent to manage at-home exercises
- A comprehensive protocol for most animal rehab patients will focus on balance and proprioception, core strengthening, endurance and flexibility
- Rehabilitation therapy centers offer many other beneficial treatments in addition to therapeutic and active exercise
- Rehabilitation therapy should be a standard feature of the complete care plan for injured, disabled or otherwise debilitated pets

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According to veterinarian **Dr. Janice Huntingford**, "Therapeutic exercises are the cornerstone of rehabilitation" for pets.¹ Huntingford, who is a certified canine rehabilitation therapist, believes, "It's not lasers, and it's not underwater treadmills," but exercise that should form the foundation for every veterinary patient rehab protocol.

I, and most of the veterinary rehabilitation specialists I know, concur with Huntingford's perspective on exercise, and agree it is crucial in terms of improving an animal's range of motion and muscle strength, flexibility, balance, gait and proprioception (a.k.a kinesthesia, or the sense of self-movement and body position). Exercise is also tremendously beneficial in decreasing pain, improving healing, promoting weight loss and enhancing endurance and performance.

The most effective exercise programs for rehab patients include "homework," and take into consideration not only the animal's age, injury, diagnosis and limitations, but also the capabilities of the pet parent in managing the at-home portion of the exercise protocol.

Creating Customized Exercise Programs for Rehab Patients

Every patient is different, so every exercise program must be individualized. Huntingford lists nine principles to keep in mind when creating an exercise protocol for veterinary rehab patients:²

1. Consider any underlying pathology that may affect the patient's ability to exercise.
2. Consider the patient's psychological state and willingness to perform exercises.
3. Consider the experience of the client.
4. Set short- and long-term goals.
5. Evaluate the patient at every visit.
6. Ensure proper body mechanics for both therapist and patient.
7. Use assistive devices if needed.
8. Watch for signs of fatigue.
9. Finish on a positive note.

Anyone who attempts to design an exercise program for a pet receiving rehabilitation therapy must possess at least a basic understanding of exercise physiology, such as the difference between slow twitch (type 1) and fast twitch (type 2) muscle fibers, and how a specific injury or immobilization of muscles impacts the patient.

This is why I always recommend working with a **certified animal rehabilitation therapist**. It's also important to know the three types of exercises that work the muscles in different ways:

1. **Concentric exercises** are contractions that shorten the muscle — they are the part of the movement during which the targeted muscle is working to perform the action. Example: the lifting movement in a bicep curl.
2. **Eccentric exercises** are contractions that lengthen the muscle, such as the movement used to extend or lower your arm during a bicep curl.
3. **Isometric exercises** are contractions of a particular muscle or muscle group. These exercises don't change the length of the muscle or move the associated joint. Isometric exercises help maintain strength. An example from human exercise is the plank hold.

According to Huntington, for the majority of animal rehab therapy patients, the focus of an exercise program should revolve around four main components: balance and proprioception, core strengthening, endurance and flexibility. Beyond that, a rehab therapist may add in movements to target the specific area of injury or disability, or in the case of canine athletes or working dogs, exercises to enhance strength and speed.

Additional Treatments Offered at Rehab Therapy Centers

In addition to therapeutic exercise, there are many other beneficial treatments offered at animal rehab therapy centers, including:

- Massage
- Acupuncture
- Chiropractic
- Joint mobilization
- Stretching
- Cold laser therapy (low-level laser therapy)

- Pulsed magnetic therapy
- Therapeutic ultrasound
- Heat therapy
- Acoustic compression therapy
- TENS (transcutaneous electrical nerve stimulation)
- Neuromuscular electrical stimulation

A Favorite of Mine: Hydrotherapy

Hydrotherapy, also called aquatic therapy, is one of my favorite rehab therapies for pets because moving in water provides countless benefits. It can help injured animals heal, relieve pain and provide emotional benefits as well.

Hydrotherapy typically involves an underwater treadmill and/or swimming. Underwater treadmills are an excellent way to make use of your pet's natural functional activities like walking, trotting and running. The treadmill takes advantage of natural gait patterns, which helps improve range of motion after an injury or surgery.

At the same time, immersion in water provides gentle resistance, which helps build and maintain muscle strength. The buoyancy of water takes pressure off injured or painful joints.

Water therapy also improves your pet's cardiovascular health, muscle strength and range of motion. Virtually all of your pet's organ systems are simultaneously relaxed and stimulated during aquatic immersion. Pain and muscle spasms are eased, stress reduction is achieved, and metabolic functions and hormones are stimulated.

Hydrotherapy can also benefit the lymphatic system, decrease inflammation throughout the body and support the digestive process. If your pet is getting up in years, he's probably slowing down a bit and perhaps losing some mobility. Hydrotherapy can not only help your senior pet get relief from aching joints, but it can also help him regain confidence.

Water movement is also great exercise for older pets who may have difficulty walking, running or completing therapeutic exercises. Regular swim sessions can also help burn calories and slim an overweight pet down without further wear and tear on aging joints. In addition, pets with arthritis, degenerative myelopathy, rear limb weakness or hip dysplasia can be excellent candidates for aquatic therapy.

Rehabilitation specialists typically work with veterinarians to customize programs to fit each pet's specific therapy needs. A course of rehabilitation can be as short as two visits or as long as three weekly visits for three months or more. Some people even opt to bring pets to regular hydrotherapy sessions to help them stay mobile and maintain muscle tone.

Formal rehabilitation therapy sessions are generally an hour in length, and progress is carefully documented at each visit. Therapy protocols also typically include individually designed home care plans that provide valuable specific guidance to pet owners in helping their animal companion recover mobility and a good quality of life.

There are also mobility devices like slings, harnesses and wheels that can be tremendously helpful for both pets and their humans. In my opinion, rehabilitation therapy should be a standard feature of the complete care plan for injured, disabled or otherwise debilitated pets.

Pets for Which Rehabilitation Therapy Is a Must

If your pet is recovering from an injury, is struggling with mobility, or has unresolved pain, a rehabilitation specialist can help. The American Association of Rehabilitation Veterinarians (AARV) provides a list of conditions that may be successfully treated with rehabilitation, as well as the types of improvements pets may experience:³

- **Osteoarthritis** — Increased mobility and range of motion, decreased inflammation
- **Hip dysplasia** — Build-supporting muscle mass, increase mobility and comfort
- **Muscle injuries** — Speed healing, restore normal functional length and decrease inflammation
- **Back injuries** — Prevent reinjury and manage pain
- **Fractures** — Speed recovery and prevent muscle contracture
- **Amputation** — Help with adaptation, build supporting muscles and manage pain
- **Neuromuscular disease** — Strengthening, adaptation and pain management
- **Joint dislocation** — Strengthen supporting muscles and ligaments and prevent reinjury
- **Tendon injuries** — Increase range of motion and strength, decrease inflammation and scar tissue, especially post-surgical repair

It's important to remember that rehabilitation therapy isn't only for dogs. Cats, horses, rabbits and many other pets can also benefit.

Sources and References
