



## The Role of Physical Therapy in Managing Amyotrophic Lateral Sclerosis Symptoms

Ahmed Khan\*

Department of Medicine, University of Chicago, Chicago, USA

### ARTICLE HISTORY

Received: 25-Apr-2024, Manuscript No. JCMEDU-24-137351;  
Editor assigned: 29-Apr-2024, PreQC No. JCMEDU-24-137351 (PQ);  
Reviewed: 14-May-2024, QC No. JCMEDU-24-137351;  
Revised: 21-May-2024, Manuscript No. JCMEDU-24-137351 (R);  
Published: 28-May-2024

### Description

Amyotrophic Lateral Sclerosis (ALS) is a progressive neurodegenerative disease that affects motor neurons, leading to muscle weakness, atrophy, and eventual paralysis. As ALS progresses, it significantly impairs the quality of life and daily functioning of those affected. While there is no cure for ALS, physical therapy plays an important role in managing symptoms, maintaining mobility, and improving the overall quality of life for patients. This study discusses about the benefits and strategies of physical therapy in the management of ALS symptoms.

### Impact of ALS

ALS, also known as Lou Gehrig's Disease, is characterized by the gradual degeneration and death of motor neurons in the brain and spinal cord. These neurons are responsible for controlling voluntary muscles, and their loss leads to muscle weakness, spasticity and difficulty in movement. As the disease advances, patients may experience severe disabilities, including the loss of the ability to walk, speak, eat and breathe independently. Given the progressive nature of ALS, the primary goals of physical therapy are to maintain physical function, enhance mobility, manage pain, and provide support for daily activities. Physical therapists work closely with patients to develop personalized exercise programs and interventions tailored to their specific needs and stages of the disease.

### Benefits of physical therapy in ALS management

**Maintaining mobility:** One of the primary benefits of physical therapy for ALS patients is the preservation of mobility and muscle strength for as long as possible. Physical therapists design exercise routines that focus on strengthening unaffected muscles and maintaining flexibility. These exercises help delay

the onset of muscle atrophy and improve overall physical endurance. For instance, low-impact aerobic exercises, such as walking, swimming, or using a stationary bike, can help maintain cardiovascular health and muscle strength without putting excessive strain on the body. Resistance training with light weights or resistance bands can also be beneficial in preserving muscle function.

**Improving flexibility:** ALS often leads to muscle stiffness and spasticity, which can cause discomfort and limit movement. Stretching exercises and range-of-motion activities are integral components of physical therapy that help maintain flexibility and reduce muscle tightness. Regular stretching can prevent contractures (permanent muscle shortening) and improve joint mobility. Physical therapists may also use techniques such as manual therapy and myofascial release to relieve muscle tension and improve blood flow to the affected areas. These interventions can enhance comfort and mobility, allowing patients to perform daily activities more easily.

**Enhancing balance:** As ALS progresses, patients may experience difficulties with balance and coordination, increasing the risk of falls and injuries. Physical therapists work on improving these aspects through targeted exercises that focus on enhancing proprioception (awareness of body position) and equilibrium. Balance training may include activities such as standing on one leg, using balance boards, or practicing walking on uneven surfaces. Coordination exercises, such as repetitive movements or using visual and auditory cues, can help improve motor control and reduce the likelihood of falls.

**Adaptive techniques:** Physical therapists play a crucial role in recommending and training patients to use adaptive techniques and assistive devices that enhance independence and safety. These devices can

range from simple aids, such as canes and walkers, to more advanced equipment like power wheelchairs and orthotic braces. Therapists assess the patient's specific needs and provide guidance on the proper use of these devices, ensuring they are integrated effectively into daily routines. By promoting the use of assistive technology, physical therapists help ALS patients maintain a higher level of autonomy and participation in everyday activities.

### **Developing a personalized physical therapy plan**

Effective physical therapy for ALS requires a personalized approach, taking into account the individual's stage of disease progression, overall health, and personal goals. The therapy plan is typically dynamic, evolving as the patient's condition changes.

**Initial assessment:** The process begins with a comprehensive assessment conducted by the physical therapist. This evaluation includes measuring muscle strength, flexibility, balance, and coordination. The therapist also considers the patient's respiratory function, as ALS can affect breathing muscles, and discusses any pain or discomfort the patient may be experiencing.

**Goal setting:** Based on the assessment, the therapist and patient collaboratively set realistic and achievable

goals. These goals may focus on maintaining current levels of function, improving specific physical abilities, or enhancing overall comfort and quality of life.

**Exercise prescription:** The therapist designs an exercise program tailored to the patient's needs. This program may include a combination of strengthening, stretching, aerobic, and balance exercises. Importantly, the exercises are chosen to avoid overexertion, which can lead to increased fatigue and muscle damage.

**Ongoing monitoring:** Regular follow-up sessions are essential to monitor progress, address any new symptoms, and adjust the therapy plan as needed. The therapist provides continuous education and support to the patient and their caregivers, ensuring they are equipped to manage the disease's evolving challenges. Physical therapy is a vital component of the multidisciplinary approach to managing amyotrophic lateral sclerosis. By focusing on maintaining mobility, reducing spasticity, enhancing balance, and providing adaptive strategies, physical therapists help ALS patients preserve their independence and improve their quality of life. Although ALS remains a challenging and progressive disease, the interventions provided by physical therapy offer significant benefits, empowering patients to live more comfortably and actively despite their diagnosis.