



Exercise Can Benefit Patients with Neuromuscular Diseases

Historically, exercise for patients with neuromuscular diseases (NMDs) has been approached with caution due to concerns about overexertion and muscle damage. But today, thanks to emerging research and a growing understanding of how different types of movement affect the body, neuromuscular care providers are reshaping that narrative. With a thoughtful approach, people with NMDs can get many of the same benefits from exercise that the rest of the population enjoys.

“There’s a lot more to physical activity than just building strength,” says Constance De Monts, DPT, a physical therapist on the neuromuscular team at Stanford Medicine. “It improves quality of life across the board — physically, socially and even cognitively.”

Redefining what exercise looks like

For many NMD patients, the concept of “exercise” might conjure images of treadmills and weight rooms — settings that often feel out of reach. But physical activity can be integrated into daily routines in more accessible ways.

“Physical activity can be as simple as sitting to balance at the edge of the bed, a stretching routine, or micro-movements throughout the day,” Constance says. “Instead of aiming for 30 continuous minutes, patients can break activity into smaller, manageable increments.”

She emphasizes that even seated activities, such as maintaining upright posture or doing light resistance movements with assistance, still count. These forms of movement help preserve function and can be tailored to each person's ability level.

Additional benefits

While the physical benefits of exercise — like improved cardiovascular fitness and maintained muscle strength — are well established, Constance points to its other advantages.

“Adaptive sports are growing,” she says. “We’ve seen patients engage in power soccer, which not only builds community but also serves as real physical activity. It’s no longer just a social outlet — it’s therapeutic in every sense.”

Cognitively, exercise is known to enhance mental well-being. For patients with NMDs, it can help manage depression and anxiety and may even slow cognitive decline.

“From kids to older adults, physical activity supports concentration, academic performance, and emotional health,” Constance says.

Understanding contraindications

Despite the benefits, exercise must be approached thoughtfully. One area of caution is eccentric exercise, which involves lengthening muscles under load, like lowering into a squat or controlling the descent of a bicep curl.

“Eccentric movements can cause microtears in muscle fibers,” Constance says. “In healthy individuals, that’s how strength builds. But in people with NMDs — especially Duchenne muscular dystrophy — it may lead to overuse and delayed recovery.”

Instead, she recommends concentric (muscle shortening) and isometric (muscle contraction without movement) exercises, which carry less risk of strain and inflammation. These alternatives allow patients to maintain or improve function without exacerbating their condition.



Constance de Monts, PT, DPT
Research Physical Therapist
Stanford Medicine

Evidence in the literature

A comprehensive [2025 review published in Muscle & Nerve](#) confirms what providers like Constance are seeing firsthand. The study analyzed dozens of trials across different NMDs and found consistent evidence of benefit, including from high-intensity interval training (HIIT) in conditions such as facioscapulohumeral muscular dystrophy (FSHD).

“Even the studies that looked at muscle biopsies and MRI scans after intense exercise showed no increased inflammation or damage,” Constance says. “That’s huge. It shifts the narrative away from fear and toward empowerment.”

Personalizing exercise plans

No two NMD patients are alike, which is why Constance recommends a symptom-based approach that relies on constant communication between clinician and patient.

“One of the best tools is a simple fatigue journal,” she says. “The patient writes down how they feel right after exercise and again 24 hours later. Did the activity limit their ability to function the next day? If so, we may need to adjust.”

She also advises starting small and building gradually, allowing ample time for recovery and adjusting plans as needed.

“It’s all about balance — supporting day-to-day life while gradually increasing capacity,” she says.

Clinicians can help their patients reframe movement as an opportunity rather than a limitation. In addition to adaptive sports, they may consider aquatic therapy, gardening with adaptive tools, and accessible recreation programs.

As the science evolves, so does the mindset around exercise and NMDs. With the right guidance and support, movement becomes a source of empowerment.

“We’re moving past the fear,” Constance says. “Exercise isn’t something to avoid — it’s something to tailor. And when it’s tailored well, it can be one of the most powerful tools we offer our patients.”



Resources

- The [National Center on Health, Physical Activity and Disability \(NCHPAD\)](#) offers a YouTube library of guided exercises, including seated and standing options.
- MDA's At-Home Physical Therapy series provides recommended exercises for several diseases, with easy-to-follow illustrations. Visit mda.org/education and scroll to "Exercise."
- The Quest Media [Guide to Getting Involved in Adaptive Sports](#) helps individuals in the community learn about adaptive sports and find programs and equipment.
- People with NMDs can find more information and inspiration for incorporating movement into their lives at MDAQuest.org/tag/staying-active.