

CASESTUDY

Parkinson's-Focused Fitness Center Breaks Down Barriers to Exercise with Biodex Technology

Movement Revolution, Greater Chicago Area



BIODEX

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Movement Revolution

Parkinson's exercise programs offered at Eric Johnson's Movement Revolution in the Chicagoland area combine peer motivation with Biodex devices to drive progress beyond physical therapy.

“Our mission is to empower people with neurological conditions to live stronger every day, in all phases of life,” explains Eric Johnson, owner of [Movement Revolution](#) neuro intensive training centers in the Chicago area. With a focus on intense exercise for people with disabilities and neurological conditions, his locations in downtown Chicago, Deerfield, and western suburbs of Chicago (coming soon) allow clients to benefit from individualized training, a sense of community, and advanced exercise technology from Biodex Medical Systems, Inc.



Eric Johnson, CSCS, CIFT, FMS
Owner, Movement Revolution.

Johnson started Movement Revolution in 2013, initially doing in-home training for Chicago residents, then opening their first location in downtown Chicago. The growth of interest led to the opening of their new flagship facility in Deerfield, where their clients span the spectrum of neurological involvement including Parkinson's disease, stroke, brain injury, MS and spinal cord injuries, to name a few.

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“It's not just about making people more fit and improve their cardiovascular health, it's allowing them to continue to do the things they love to do,” Johnson goes on, “and the best part of my job is to give people the opportunity to do things they weren't able to do before.”

Improving Access to Exercise

For Johnson, Movement Revolution was born out of an early passion for the neurological field. Starting out as an adaptive exercise physiologist at Shirley Ryan Ability Lab (formerly Rehabilitation Institute of Chicago), he worked with people at a range of ability levels and conditions, coordinating group exercise programs for people with Parkinson's disease and stroke.

Johnson's decision to pursue medical fitness was motivated by the limits on insurance-covered therapy, particularly for patients with neurological issues: “When somebody goes into physical therapy, they are there for a very finite period of time and commonly cut off by insurance or Medicare, and they're not reimbursed for services until the following calendar year.

“There are few resources for people after they're done with physical therapy. That was my driving force,” says Johnson. “I really like being on the community side of things and giving access to people to be active after they are done with physical therapy.”

Breaking Barriers with Biodex

Having experience with Biodex equipment from his work at Shirley Ryan, Johnson understood the value advanced technology brings to the client experience. For the new Deerfield facility, it all began with eliminating obstacles with Biodex's [FreeStep SAS Supported Ambulation System](#).

Johnson explains, “One of the biggest things that I wanted to provide in our facilities was to eliminate barriers and allow anybody to participate in exercise. I knew that having a body weight support track system would eliminate the fear of falling, would help people stand with more confidence, and just allow us to channel these people in different ways.”

The FreeStep features harnesses attached to a ceiling-mounted track that is customized to suit the facility. Once in the harness, clients can perform standing and over-ground exercise, work out on a treadmill, and move from one task to the other, without fear of falling.

“We have to push one's ability level and retrain the body to walk and balance with more confidence and build up strength. We would not be able to do this if it wasn't for the access that the FreeStep gives us. It is a very unique tool that opens a lot of doors for more people to be more active.”

For anyone with limited mobility, whether from a movement disorder to general muscle weakness, fear of falling is one of the biggest inhibiting factors for people to be more active, according to Johnson.



The Biodex FreeStep SAS keeps clients safe from falling during exercise.

“The FreeStep system has been instrumental in helping us give people the ability to walk more freely and really push the boundaries of what they can do. That goes for people with Parkinson’s, stroke, and all neurological conditions. The FreeStep really allows us to say, you’re not going to fall.”

“The FreeStep system has been instrumental in helping us give people the ability to walk more freely and really push the boundaries of what they can do.”

Progress... Powered by Data

Parkinson’s diagnoses make up about 70 percent of the Movement Revolution clientele, with adults typically ranging from 50 years old into their nineties. The new state-of-the-art Deerfield location offers a Parkinson’s program that integrates training using Biodex equipment, as well as objectively assessing each client in terms of ability level. Johnson views the concrete data as crucial to both staff and clients.

“I think a lot of times, people will join an exercise program, whether for Parkinson’s or to get more active in general, and there are no metrics to help them understand their progress,” Johnson explains. “We believe strongly in gathering data so we can be informed and track our clients’ progress, and also show them how their training is making a difference.”

Balance System™ SD

Every client who comes into the facility is taken through a comprehensive evaluation that includes assessments using the Biodex **Balance System SD**. The Balance System SD offers a series of testing and training modes using either a static or dynamic platform. First, staff performs the limits of stability test.

“Many people with Parkinson’s experience difficulty shifting their weight,” Johnson explains. “The limits of stability test really allows us to figure out exactly where some of those imbalances are, and the underlying mechanisms that might be impacting their ability to shift their weight.”

For people with Parkinson’s who may experience instability, the postural stability test allows staff to understand how their degree of sway might be affecting their ability to maintain balance. This helps them tailor training to work on those issues.

“I find that there are some really interesting ways to utilize those training programs,” relates Johnson. He describes his use of the percent weight-bearing mode on the Balance System to make people more aware of how they are performing functional activities:

“A lot of times when we have clients with Parkinson’s, one side is more affected than the other. They tend to neglect or avoid the side that is more affected, so they naturally use the stronger side. We use the percent weight-bearing feature to allow people to visually see and understand how much weight they are actually putting to their left leg versus their right leg.”

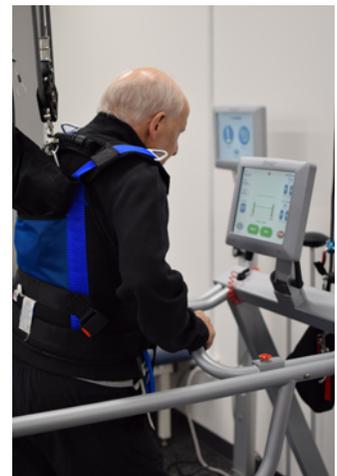
He continues, “Then, we have them maintain 50 percent weight-bearing from right to left and front to back as they go into a squat. That helps people understand how to sit down in a chair and how to get out of a chair.”

“We believe strongly in gathering data so we can be informed and track our clients’ progress, and also show them how their training is making a difference.”

Gait Trainer™ 3

As part of the comprehensive assessment, clients are taken through a three-minute gait analysis on the **Biodex Gait Trainer**, which allows staff to understand the client’s ability to shift weight and its relation to stride length while walking. The system has an instrumented treadmill track that senses footfalls and records key gait parameters such as step length and step symmetry.

“The Gait Trainer is probably my favorite tool,” Johnson relates. “It allows us to track and see where our clients are from day one, and then use that as a coaching tool in their one-on-one or group training sessions to be much more mindful and aware of what they need to work on.”



Audio/visual cueing and biofeedback provided by the Biodex Gait Trainer helps clients correct gait issues in real time.

On-screen guides help clients understand and correct foot placement in real time. Johnson praises the instant feedback and on-screen cueing: “For example, it shows you how a more affected leg is functioning as they’re walking on the treadmill. Repeated practice with visual feedback over and over allows us, and allows the client, to be more aware of these imbalances and see measurable improvements.”

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Building a Sense of Community

Movement Revolution offers a spectrum of programs and activities from more personal to large groups, as well as individualized training where they are able to target specific symptoms such as freezing. Their largest group class is Rock Steady Boxing, a non-contact boxing class for people with Parkinson’s disease where boxing is used as a tool to elicit bigger, more dynamic movements.

“I think just the idea of boxing is an empowering form of exercise,” explains Johnson. “When you get a lot of people together, especially in their seventies, eighties and nineties, who had never thought about boxing or have never put gloves on, it empowers them and adds a unique element to their life.

He continues, “It has formed its own little community within the class, and our facility. Everyone is working to live stronger, and our programs foster an environment of inclusion and empowerment. They can share common difficult times or common symptoms and be able to talk to people who understand and are experiencing the same thing.

“It just adds another support network for them,” says Johnson.

Looking to the Future

Johnson and his staff have built relationships with the clinical community in the Chicago area, and see many referrals from local physicians and therapists. Recently, news of the programs and technology at Movement Revolution has spread through word-of-mouth.

“My goal from the beginning has been to increase accessibility to people with neurological conditions to be more active,” says Johnson. “Right now, these centers equipped with these unique Biodex devices and tools is a great way to do that.”

Movement Revolution is currently looking to expand into new areas in and around Chicago, and finding the best way to help more people with neurological issues live stronger.

Biodex is always advancing our technology to serve you better.

FreeStep SAS

www.biodex.com/freestep

Gait Trainer™ 3

www.biodex.com/gait

Balance System™ SD

www.biodex.com/balance

For more information on Biodex Physical Medicine & Rehabilitation devices:

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