Alive and Kicking

Follow this and additional works at: https://ecommons.udayton.edu/news_rls

Recommended Citation
https://ecommons.udayton.edu/news_rls/914

This News Article is brought to you for free and open access by the Marketing and Communications at eCommons. It has been accepted for inclusion in News Releases by an authorized administrator of eCommons. For more information, please contact frice1@udayton.edu, msclangen1@udayton.edu.
University of Dayton, Ohio (url: http://www.udayton.edu/index.php)

Alive and Kicking

05.13.2011 | Research  Daniel Katke, who has lived with multiple sclerosis for 11 years, has trouble lifting his left leg and walks with the help of a cane. But for the past five weeks, as part of a University of Dayton research study, he’s pushed himself to the limit, throwing punches and kicks in a modified kickboxing program.

And it's made a difference.

"I am more mobile with my lower body, and though I still walk with a cane outside, I am able to get around my house without it," said Katke, a 56-year-old Kettering resident.

Dr. Kurt Jackson, a physical therapist and the neurology coordinator of the University of Dayton's doctor of physical therapy program, recently completed a second research study on the safety, feasibility and effectiveness of kickboxing for people with multiple sclerosis. He found kickboxing is safe, may improve the balance and mobility of people with MS and can be adapted for people with varying degrees of the disorder.

"Ideally, a person with MS needs to perform exercises that target balance, aerobics, strength and flexibility," Jackson said. "Kickboxing lets a person do all of these in a single activity."

He published the results of a pilot study last year in the Journal of Bodywork and Movement Therapies, which showed meaningful improvements in participants' balance, walking ability and posture. While he is still analyzing the data from this second study, he said he has already observed similar results.

Jackson recruited 13 people with varying degrees of MS for his research study. He divided them into three groups and had them exercise three times a week for five weeks with local kickboxing instructors. The research team conducted the study at Kettering Health Network's NeuroRehab and Balance Center on the campus of Southview Hospital.

The program progressed gradually, eventually adding combinations of punches, kicks and footwork, first using imaginary targets and then heavy bags.

To measure the effectiveness of the program, Jackson had participants perform a battery of clinical and computerized tests of balance and walking ability. He enlisted the aid of University of Dayton engineering professor Kim Bigelow — who analyzed the computerized tests — to run the tests before the five-week program began and at the end.

"The participants are showing the most improvement in the tests that measure the higher levels of balance, likely because kickboxing requires these higher skills," Jackson said. The exercises specifically target the participants’ core trunk control, which is needed for basic tasks such as walking, getting dressed while sitting on the edge of a bed, getting on and off a toilet and preventing falls.

Jackson said kickboxing is adaptable and is viable for people even with very limited mobility. He has had participants begin in a seated position with a back rest and advance to a chair without a back rest and eventually to standing, is possible.

"In our current study, we used harnesses suspended from the ceiling to spot the participants," he said. "We want the participants to challenge themselves as much as possible and even be able to fall a little to improve their balance reactions."

MS and other neurological disorders such as Parkinson's disease and strokes are chronic conditions that must be managed for life. Patients often will work with a physical therapist for one to two months until their insurance benefit runs out, Jackson said.

"We discharge them and say, 'come back when you're going downhill again.' We need to offer them something to do between their visits, something that will be safe and effective," he said.

A community-based exercise program like kickboxing may be just what the doctor ordered. Jackson recommends if people with a chronic neurological condition want to enroll in a community kickboxing program, they should consult a physician or physical therapist to check their balance and determine if they would be safe to participate and if any special equipment or precautions are needed.
Trilogy Movement Studio in Oakwood is a good example, Jackson said. Owner Natalie Malay-Peppel approached him for advice after someone with MS wanted to participate in kickboxing activities. This led to the current research study during which Malay-Peppel assisted as an instructor. And Jackson is currently working with the local chapter of the National MS Society to promote an ongoing kickboxing program once the research is completed.

"We have to develop relationships between physical therapists and people who work in community-based exercise classes to work as a team to provide the care these people need," he said. "At the University of Dayton, we encourage our students to think about how they can be involved in community wellness programs, to think differently about their vocation. They have a responsibility to meet the needs of their patients long-term, and they need to think out of the box from just working in a hospital or clinic."

For Katke, this out-of-the-box thinking has inspired him to exercise more and to challenge himself. Although the kickboxing program is over, he plans to continue using a treadmill at home and getting outside more often. He would also jump at the chance to join another kickboxing class in the community if he could find one that offered the support he needs.

"It was difficult at first to even raise my leg to give a knee kick to the dummy," he said. "But I know it's worth the effort. We cancelled classes one day because so many people were on vacation, and not having done the kickboxing, I noticed a big difference in my mobility the following day."

*For more information, contact Cameron Fullam, assistant director of media relations, at 937-229-3256 or fullam@udayton.edu.*