Local Scientist Dr. Jacob Sosnoff Discusses Current Research on Strategies to Reduce Falling in People with Multiple Sclerosis

Dr. Jacob Sosnoff

Last October, funds from the Illinois State Lottery helped launch eight innovative local MS research projects which range from investigating the reduction of disease development and stimulation of myelin repair to original rehabilitation and physical exercise techniques. To get a better understanding of the research happening statewide, Greater Illinois Chapter marketing staff interviewed the lead researcher overseeing each pilot project.

Dr. Jacob Sosnoff is one of the National MS Society's grant recipients for 2013. Dr. Sosnoff received his Ph.D. in Kinesiology from The Pennsylvania State University in 2005 and is currently an associate professor in the Department of Kinesiology and Community Health and University of Illinois at Urbana-Champaign. Dr. Sosnoff recently spoke with the National MS Society about his current research regarding ways to prevent falling in individuals with MS.

Q: ***You are a professor in the Department of Kinesiology and Community Health at University of Illinois at Urbana-Champaign. Can you briefly explain what the study of kinesiology entails?***

A: Kinesiology is the study of movement - anything related to movement and physical activity.

Q: ***How did you become interested in your field?***

A: My family background is in orthotics and prosthetics, meaning braces and artificial limbs. I grew up with fake legs and assistive devices in the back of the family station wagon. On weekends, my father would take me and my brothers to hospitals when he did patient visits. I've always been interested in movement and how the body works. My grandfather who started this artificial limb business had post-polio so he always had a limp and used a cane and walkers throughout his life so that's why I've always been interested in walking and movement. I didn't realize you could study movement in and of itself until I got to college.

Q: ***Did you always know you wanted to go into research?***

A: I more or less fell into research. I went to Penn State and was fortunate to get a fellowship to study aging and movement. I started doing research and I realized I really loved and enjoyed it.

Q: ***You were recently awarded funding from the Illinois Lottery to pursue a new research project regarding falling in MS. What is the importance in researching falling in MS patients?***

A: About half of everyone with MS falls. We've spent a lot of time trying to understand falling in older adults but little research has been done in falling in patients with MS. There are two consequences to falling – first, there is of course the physical consequence. Not only do people with MS fall a lot, but people with MS who do fall end up being hurt quite a bit. Their bones are weaker, and falls that might not hurt someone without MS may, because of their weaker bones, cause greater damage to patients with MS. Then there's the psychosocial consequence of a fall. Patients with MS are fearful of falling, so in order to decrease the likelihood of falling, they stop being active which leads to a decrease in their fitness and physiological function which then leads to a decrease in their mobility. Due to this decrease in fitness and mobility, the patient becomes weaker, and falls again. It's a cycle. Research in aging literature has shown two effective ways to prevent falls. There is the exercise route, in which if we train to increase balance and strengthen our legs, we're less likely to fall. Then there's the educational component. We need to educate people that falling is not a symptom of MS. People think falling is unavoidable, there's the mentality of "there's nothing I can do to prevent this, it's just part of having MS." In fact, there are a lot of ways we can decrease the chance of a fall, but first you have to realize that you can indeed prevent it. Education also teaches in what situations and circumstances someone should be using a cane or another assistive device.

I am lucky enough to do this research with a great group of researchers including Professor Rob Motl who is an expert in the benefits of exercise in MS and Professor Marcia Finlayson who is an expert in education factors in falls prevention.

Q: ***What does your study involve?***

A: The research project itself is to see if we can reduce the number of falls that people have if they exercise as well as do an educational component. Another aspect that's unique is we're doing home-based exercise, so people will be able to complete these exercises in their homes. We've developed an exercise program at home that targets their muscle strength and balance and we want to do that along with an educational component to see if we can reduce falls.

Q: ***Many people are frustrated that there is still no cure for MS. Why is it important to fund projects invested in improving quality of life rather than focus research dollars towards finding this cure?***

A: Finding a cure is the ultimate goal but until we get there we should try to maximize quality of life and how to enable people to participate in life as much as they can while they are waiting for the cure to be found. I see reducing falls as a way to do this.