Physical Activity Protects against Alzheimer’s Disease

Individuals who have a family member with Alzheimer’s disease see firsthand the devastating consequences of the illness. After seeing the progressive nature of the illness and the dramatic memory loss that results, these individuals are indeed frightened of the prospect of being affected by Alzheimer’s disease. However, a new study being conducted at the University of North Carolina at Greensboro may offer insights as to the potential role of physical activity in protecting these individuals from becoming victims of Alzheimer’s disease.

This study, conducted by researchers at the University of North Carolina at Greensboro, was recently described at the national meeting of the North American Society for the Psychology of Sport and Physical Activity. Jennifer L. Etnier, professor of kinesiology at the University of North Carolina at Greensboro, is leading the research team in exploring the potential benefits of physical activity. “We know that physical activity is protective against Alzheimer’s disease, but we also believe that the biggest benefits of physical fitness may actually be achieved by individuals at greatest genetic risk for Alzheimer’s”, says Etnier. This is particularly important for the children and siblings of persons with Alzheimer’s disease because these individuals are likely to be at a heightened genetic risk increasing their likelihood of getting Alzheimer’s disease by 5-18 times.

The current study is designed to compare the benefits of physical activity achieved by people with and without a genetic risk of Alzheimer’s disease. Researchers invited 66 older adults who were functioning normally, but who have a family history of Alzheimer’s disease, to participate in a physical activity program at UNCG. The program consisted of walking and strength training activities performed for an hour per day, three days per week for eight months. Performance on a variety of thinking tasks was assessed prior to the program, after 4 months, and at the end of the program. Of the 53 participants who completed all testing sessions, 6% are at highest genetic risk of Alzheimer’s, 26% are at moderate risk, and 68% are at low risk. By comparing improvements in thinking abilities between these three groups of people, researchers will be able to discover if those at greatest genetic risk actually improve the most in response to becoming physically active.

If the results of this study support that physical activity improves thinking abilities and that these improvements are greatest for those most likely to become demented, this would be important from a public health perspective. Alzheimer’s disease affects 150,000 residents of North Carolina and 5.2 million Americans and is the sixth leading cause of death in the United States. The costs of Alzheimer’s disease are high given $214 billion in health care costs, and the burden of the disease is great considering the emotional and physical costs for an estimated 15.5 million unpaid caregivers. “Given that there is no known cure for Alzheimer’s disease, this evidence relative to the beneficial effects of physical activity is critically important. If we can delay the development of Alzheimer’s disease by 5 years, this could reduce a person’s risk of Alzheimer’s disease by 50%,” notes Etnier.

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