

mental **ACTIVITY**

Dr. Jennifer Etnier received the Senior Research Excellence Award for her scholarship on physical activity and cognition. A fellow of the National Academy of Kinesiology and the American College of Sports Medicine, Etnier is known internationally as an expert on exercise's impact on aging brains, with more than 90 peer-reviewed articles and over \$6 million in funding. The Julia Taylor Morton Distinguished Professor also holds five teaching awards and is a youth sports advocate who was 2017's Greensboro United Soccer Association's Coach of the Year.

MOVING INTO KINESIOLOGY

"I started out as a college athlete pursuing computer science and math. But I realized I didn't want to spend all day on a computer, so I did a sports psychology master's, planning to work with athletes. As I did my PhD work, I became interested in the broader benefits of physical activity for health.

"The irony is, as a researcher, I spend all day on a computer. But there's nothing more fun than finding and figuring out how to answer an interesting question."

EXERCISE AND COGNITION

"Older adults in my family had differences in quality of life relative to cognitive capacity, which triggered my interest in exercise to protect cognitive performance.

"My lab found a single session of moderate intensity aerobic exercise improves memory – in the short term and after 24 hours. Even better, if you participate in physical activity on a regular basis, cognitive benefits accumulate. Formerly sedentary people saw benefits in our studies at the four-month mark and more at the eight-month mark."

COMMITMENT TO A CAUSE

"Our NIH clinical trial explores whether physical activity can delay or prevent Alzheimer's. Participants, all with family histories of Alzheimer's, spend a year in our study. I've learned how committed research volunteers can be. We have someone in Florida driving to Greensboro three times a year to participate. It's really special and makes research particularly rewarding."

APOE GENOTYPE

"APOE genotype is the strongest susceptibility gene for Alzheimer's. You could have 0, 1, or 2 copies of APOE, giving you lowest, heightened, or dramatically increased risk.

"Our PAAD2 study will verify our findings that physical activity improves memory for aging adults with a stronger research design. But our major question is whether exercise will cognitively protect people with genetic risk for Alzheimer's, and whether genetic risk changes that effect.

"We're also doing MRIs. Individuals with highest genetic risk have structural brain changes as early as their 30s. If we can capture brain changes mitigated by exercise, that would be really powerful.

"Any findings that exercise can protect people at risk would be great. Alzheimer's is a leading cause of American deaths. If we can delay onset, that's more years with better quality of life – more years with your children and grandchildren."

CHILDREN AND YOUNG ADULTS

"We've found impacts across the lifespan. For example, exercise during the school day produces improvements in memory, which persist 24 hours later. This suggests physical activity may maximize the learning experience.

"Students: Exercise before you study, and you may improve your test performance the next day."

COACH AT HEART

"Mentoring is one of my biggest joys. Seeing students develop into independent scholars is a remarkable transition.

"I love to help people move towards their potential. I also get that coaching soccer.

"We know physical activity is so important for our physical and mental health. The two books I wrote on youth sports psychology focus on helping young athletes achieve their potential and helping coaches ensure kids have a great experience and find a sport they fall in love with. And then they hopefully become lifelong physically active individuals."

interviews by Sangeetha Shivaji
learn more at go.uncg.edu/etnier
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