

Dr. B. Sandroff on cognition, fitness and physical activity in progressive multiple sclerosis-Ep40

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JOAN BANKS-SMITH
00:07

[music] I'm Joan Banks-Smith for Kessler Foundation's Fast Takes, research that changes lives. In this episode, Dr. Brian Sandroff, Senior Research Scientist in our Center for Neuropsychology and Neuroscience Research, talks about his peer-reviewed article cardiorespiratory fitness and free-living physical activity are not associated with cognition in persons with progressive MS: Baseline analyses from the CogEx study. This was published on October 1st, 2021 in the journal Multiple Sclerosis. The funding source was the Multiple Sclerosis Society of Canada. Dr. Sandroff, what are the main takeaways of this publication?

BRIAN SANDROFF
00:51

The main takeaways are that cognitive impairment is a major issue in persons with progressive MS, and there aren't many treatments for it that are well-established or effective. So our line of inquiry is that we are trying to consider aerobic exercise training as a possible treatment for cognitive impairment in those with progressive MS. To do that, we first wanted to use a cross-sectional study as opposed to a randomized controlled trial. This was a secondary analysis of baseline data from the CogEx randomized controlled trial, which will involve upwards of 300 people with progressive MS. And our analysis took place in 240 people with progressive MS who also had cognitive impairment. The study found that cardiorespiratory fitness and physical activity as cross-sectional surrogates for aerobic exercise training were actually not associated with cognitive performance and those with progressive MS. And this was due to a number of reasons. One may have been a restricted range of scores on the outcomes, but another reason that we thought might be relevant is that maybe increasing cardiorespiratory fitness and enhancing free-living physical activity might not be primary mechanisms of action for exercise related improvements in cognition in this population. But the good news is that since this is a randomized controlled trial, and we only analyze the baseline data, we'll be able to test this in the forthcoming analysis.

BANKS-SMITH 02:20

What is the impact and next implications of the publication to the field?

SANDROFF 02:24

The implications, again, are that increasing physical activity and physical fitness might not represent primary mechanisms of action of aerobic exercise training effects on cognition in those with progressive MS, but instead represent important manipulation checks for documenting the success of an aerobic exercise training intervention and confirming the separation between conditions of a trial, like where people who undergo aerobic exercise would be expected to increase physical activity and physical fitness, whereas persons who undergo a non-aerobic exercise condition would not be expected to increase those outcomes. And this also is important for informing the development of future randomized controlled trials that aim to manage cognitive impairments and those with progressive MS.

BANKS-SMITH 03:12

Learn more about Dr. Sandroff, the Center for Neuropsychology and Neuroscience Research in his peer-reviewed article in the program notes. Tuned into our podcast

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BANKS-SMITH 04:09

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