

Tailored Rehabilitation Could Improve Thinking Speed in People with Progressive MS

Transcript

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00:00:04 Bill

Many people with progressive multiple sclerosis, or MS, experience changes in thinking speed that can make everyday activities more challenging. Tasks like following conversations, processing information, or staying focused may take more effort than they once did.

Real-Life Science highlights peer-reviewed research and what those findings may mean for everyday decisions about health, work, and daily living. In this episode, we look at new research showing that certain types of brain-training exercises may help improve thinking speed in people with progressive MS.

Researchers found that not all cognitive exercises work the same way. Some forms of training, particularly those that strengthen attention and concentration, were linked to greater improvements than others. These findings may help clinicians create more personalized rehabilitation programs that better match individual needs.

This is a great example of how research can move beyond the laboratory and provide practical insights that may improve everyday life.

00:01:15 Bill

Many people with progressive multiple sclerosis experience slower thinking speed, making it harder to process information, stay focused, and keep up with everyday tasks. In a secondary analysis of the international CogEx trial, researchers shared the strongest gains and key factors of the computerized cognitive training program that contributed to cognitive improvement.

Exercises that challenge attention, concentration, and divided attention were most strongly linked to

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improvements in thinking speed. The findings could help make cognitive rehabilitation more personalized for people with progressive multiple sclerosis.

Scientists from 11 research centers in Canada, the United States, England, Denmark, Italy, and Belgium analyzed data from 153 people with progressive MS who completed a 12-week computerized cognitive rehabilitation program called RehaCom.

The RehaCom intervention consisted of five computerized training modules focused on attention, concentration, and processing speed. Processing speed is commonly affected by MS. Each module is designed to practice a specific thinking skill.

Participants completed brain-training sessions twice a week, advancing through increasing levels of difficulty over the 12-week treatment period.

As participants improved, the exercises became more challenging. Researchers measured how far each participant progressed in each training module and compared those results with changes in thinking ability.

The findings suggest that cognitive rehabilitation may work best when it is tailored to each person's needs. Rather than using the same exercises for everyone, clinicians may be able to select the types of training most likely to help each individual improve.

00:03:16 Bill

The researchers found that some exercises had a much bigger impact than others. Let's take a closer look at the key results from the study.

- Attention and divided attention exercises produced the greatest improvements in thinking speed
- About 40 percent of participants showed clinically meaningful gains in processing speed

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- People with stronger cognitive skills at the start of the study were more likely to benefit
- The training improved processing speed, but not memory

00:03:49 Bill

Those findings raise an important question: what could this mean for people living with progressive MS and the professionals who support their care?

These findings suggest that personalized cognitive rehabilitation may help clinicians match people with progressive MS to the training exercises most likely to improve their thinking speed.

Rather than treating all cognitive exercises as equally effective, rehabilitation programs may achieve better results by focusing on the skills that have the greatest impact for each individual.

00:04:25 Bill

As researchers continue to explore personalized approaches to cognitive rehabilitation, here's where you can learn more about the study and the team behind it.

The complete article was published in the journal *Neurorehabilitation and Neural Repair* (2026): "Looking Beyond Dose: Identifying Responders and Non-Responders to RehaCom Computerized Cognitive Rehabilitation in Progressive MS: The CogEx Study."

The lead researcher was Cecilia Meza a clinical research coordinator at Sunnybrook Health Sciences Centre and St. Michael's Hospital in Toronto. Collaborators included Kessler Foundation researchers from the Center for Neuropsychology and Neuroscience Research: Doctors Silvana Costa, Nancy Shevrolotti, John DeLuca and Brian Sandroff.

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00:05:18 [Music] Bill

This study suggests that tailoring cognitive rehabilitation to each person's needs may help improve thinking speed in people with progressive MS. Exercises that target attention and concentration appear to offer the greatest benefit, showing that the right kind of training may matter just as much as the amount of training.

That is the value of Real-Life Science, translating research findings into practical insights that can help guide care, support informed decisions, and improve daily life.

To stay informed about the latest research in rehabilitation and brain health, explore more evidence-based studies and share this information with others who may benefit.

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