

Activities like playing cards may assist stroke rehab as well as virtual reality

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Sometimes in health care, simple activities can be just as effective as the latest technology.

A new study has found that simple, widely available and inexpensive activities such as playing cards or repeatedly throwing a foam ball or wad of paper into a wastepaper basket are just as effective in helping people regain strength and co-ordination following a stroke as playing [virtual reality](#) games.

The study, published today in the journal *Lancet Neurology*, is encouraging news for the 15 million people worldwide who suffer a stroke each year and may not live near a stroke rehabilitation centre or in a country with a sophisticated health-care system, or have health-care insurance, said lead author Dr. Gustavo Saposnik, a neurologist at St. Michael's Hospital in Toronto.

The study was based on a clinical trial conducted at 14 centres in four countries in which patients were randomized into two groups. In addition to conventional rehabilitation therapy, one group received 10, one-hour sessions of virtual reality using the Nintendo Wii system and the other spent the same amount of time doing simple recreational activities such as playing cards or dominoes.

Patients randomized to both groups saw a 30 per cent and 40 per cent improvement in motor performance at the end of two weeks of the intervention and four weeks after the intervention, respectively.

"But there was no significant difference between the two groups in terms of strength, dexterity, gross [motor skills](#), quality of life or activities of daily living," said Dr. Saposnik, who is also a scientist in St. Michael's Li Ka Shing Knowledge Institute. "We all like technology and have the tendency to think that new technology is better than old-fashioned strategies, but sometimes that's not the case. In this study, we found that simple recreational activities that can be implemented anywhere may be as effective as technology."

Dr. Saposnik said he was surprised by the results, because many previous studies, including his own, had a different conclusion, and because virtual reality has become an emerging strategy to enhance motor skills in stroke rehabilitation. Previous studies and review, including Dr. Saposnik's pilot study published in 2010, suggested up to 20 to 30 per cent improvements in the motor skills of patients who had virtual reality therapy.

Dr. Saposnik said the new findings could be the result of the fact this clinical trial was the largest of its kind and used a more accurate comparison of the total time of therapy each group had. Both groups of randomized patients received the same amount of conventional therapy and then the same amount of time of either [recreational activities](#) or virtual reality. In previous studies, groups who received conventional and virtual reality therapy were compared to those who received only conventional therapy, with no add-ons.

Provided by St. Michael's Hospital

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