

Non-intense physical activity to reduce depression and boost recovery of stroke patients

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You don't always need to build up a big sweat to reap the healing benefits of physical activity. Research has found that even a low-intense exercise program can reduce depression symptoms and boost physical therapy results in recovering stroke patients.

"The power of physical activity to raise the spirits of recovering [stroke patients](#) is stronger than anyone suspected," Heart and Stroke Foundation researcher Dr. Jocelyn Harris told Canadian Stroke Congress, co-hosted by the Canadian Stroke Network, the Heart and Stroke Foundation, and the Canadian Stroke Consortium.

She says that many stroke survivors experience feelings of depression in the weeks and months following stroke, which can interfere with the recovery process. This may be due in part to the fact that depression can cause a lack of motivation, increased fatigue, and trouble concentrating.

Intense physical activity has a positive effect on reducing depression for most stroke patients. But some stroke patients undergoing medical treatments have special challenges and can't reach high activity levels, she says.

"Many stroke patients could never reach aerobic levels high enough to alleviate [depressive symptoms](#)," says Dr. Harris, who works at the Toronto Rehabilitation Institute.

Without that fitness boost, depression can become a perpetual, unwelcome guest for stroke patients and their caregivers.

This new study shows there is no reason for these patients to miss out on the benefits of physical activity.

The study followed 103 recovering stroke patients who were all receiving regular, standard treatment in hospital.

Fifty-three - just over half – of the patients were enrolled in an additional, experimental program for upper limb recovery called Graded Repetitive Arm Supplementary Program (GRASP). The remaining 50 patients carried on with regular treatments.

Patients in the GRASP group spent an extra 35 minutes four times a week doing non-intense arm exercises as part of rehabilitation activities, such as pouring water in a glass, buttoning up a shirt, or playing speed and accuracy games.

Depressive symptoms were measured by the Center for Epidemiology Depression Rating Scale (CES-D), which measures symptoms of depression.

The GRASP treatment program improved stroke-affected arm and hand function by 33 per cent as well as improving the amount that the patient used their arm and hands. "At four weeks, the GRASP patients also reported less depressive symptoms and greater change scores than those in the control group did," says Dr. Harris. "The GRASP patients all did better – much better." The effects lasted up to five months.

"Depression and depressive symptoms in the weeks following a stroke are very common. Depression may be a direct result of the damage to a region of brain and in addition, the sudden change in ability and life

circumstances," says Heart and Stroke Foundation spokesperson Dr. Michael Hill. "It's important to know that depression is treatable. Patients and caregivers should mention depressive symptoms and seek treatment during follow-up visits with their neurologist, internist, or family physician."

Nobody knows for sure how many patients show depressive symptoms after stroke, says Dr. Harris. "In the literature, the rate ranges between 23 and 72 per cent. That is a huge difference."

These numbers point to the importance of planning for the needs of the baby boom generation who are currently poised to enter the high stroke risk stage, says Dr. Hill.

Dr. Harris wants to take the GRASP program out of the hospital and into the community.

"We need to create more meaning and purpose in the lives of stroke survivors," says Canadian Stroke Network spokesperson Dr. Antoine Hakim. "Whether it is gardening, enjoying the grandchildren, or going for a walk in a beautiful park, there are many focuses that can raise mood, alleviate depression, and improve recovery in [stroke](#) survivors."

Provided by Heart and Stroke Foundation of Canada

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