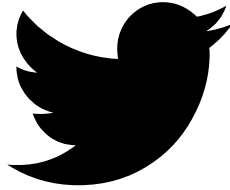


HEALTH & WELLBEING

Gaming device designed for at-home stroke rehab

By Ben Coxworth
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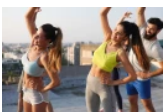
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Test subjects try out the H-Man Articares

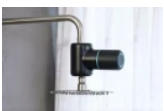
When a stroke victim has lost the use of an arm, they typically have to perform rehabilitative exercises utilizing heavy, costly, clinic-based equipment. A compact new portable device, however, could be used by patients in their own homes.

Known as H-Man, the robotic tool was designed by a team at Singapore's Nanyang Technological University (NTU). It weighs just 14 kg (31 lb), and can be placed on a regular household table.

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Patients grasp its joystick with the hand of their afflicted arm, and are then guided through various game-oriented physical tasks by a display on its integrated screen.

Gauging their arm strength via sensors in the joystick, H-Man proceeds to increase or decrease the difficulty of the tasks accordingly, with the end goal of helping the patient to relearn sensorimotor control of the limb. The internet-connected device also sends regular progress reports to the user's physical therapist.

In clinical trials, patients who used H-Man over a six-week period reportedly improved their mobility at the same rate as a control group utilizing conventional equipment. The technology is now being commercialized by spinoff company Articaires.

"For post-stroke or brain injury patients, it is challenging for them to make the journey from home to hospital and back, so they often require a family member or helper to assist them," says Articaires CEO, Dr. Asif Hussain. "Our hope is that the H-Man robot can help bridge this gap by allowing them to do therapy in the nearby day rehabilitation centre, clinic or even at home, since we have clinically demonstrated its therapeutic efficacy and safety."