

“BIONIC ARM” MAY HELP STROKE PATIENTS, RETRAIN BRAIN

*80% of stroke patients lose use of arm,¹ hi-tech brace could
give new hope*

The Ohio State University Wexner Medical Center

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SUGGESTED TEASE	Still to come, a hi-tech device that could offer help and hope to millions of stroke survivors. Details on a new “bionic Arm”, next in health news.
ANCHOR LEAD	By the time this next story is over, three more people will suffer a stroke in this country - it happens nearly 800-thousand times a year. ¹ Even if they survive, 8 out of 10 stroke patients will lose at least some movement in one of their arms. ¹ But a new device could change that. As Clark Powell shows us, a new, high-tech “bionic” brace could not only help stroke patients function better now, it just might restore movement in their arms in the future.
	(Nats - Shots of Sabrina at home) :02
CG: Courtesy: The Ohio State University Wexner Medical Center Shot of Sabrina rinsing dishes	Even after years of struggling with paralysis in her left arm, Sabrina Pridham says it’s still hard to believe that her life all changed in a matter of seconds. :09
Point-of-view shots from race car, shots of driver’s hands	(Nats - race car) :01 / :10
CG: Sabrina Pridham Stroke survivor 1.09.51 - 1.09.58	“When I turned my neck to talk to him, my carotid artery dissected immediately, causing a stroke.” :07 / :22

<p>Shots of Sabrina folding towels</p> <p>Tilt from Sabrina's face to her left arm</p>	<p>Sabrina would spend the next 2 years in rehab learning to walk and function all over again. But, like most stroke survivors, the one thing doctors couldn't do, is give her full use of her arm. :12 / :34</p>
<p>CG: Stephen Page, PhD The Ohio State University Wexner Medical Center 1.03.10 - 1.03.22</p>	<p>"About 80% of stroke survivors have some sort of upper extremity impairment, and stroke is the leading cause of disability in the whole country. So, there's a lot of stroke survivors out there who have this problem." :12 / :46</p>
<p>Shots of Dr. Page putting device on Sabrina</p> <p>Shots of Sabrina doing tasks with arm</p> <p>Shots of bionic arm - shots of Sabrina turning on light switch</p>	<p>So Stephen Page of The Ohio State University Wexner Medical Center is taking a new approach to rehab by using this so-called 'bionic arm'. When it senses muscles firing, it takes over, extending, lifting and moving paralyzed arms. Which not only helps patients now, but could help them permanently. :17 / 1:03</p>
<p>Dr. Page (CG'd earlier) 1.07.12 -1.07.22</p>	<p>"The repetition seems to turn on the brain, which is called neuroplasticity, cause the brain to rewire around the damaged area after the stroke, and actually restore some movement." :10 / 1:13</p>
<p>Shots of Sabrina in rehab at refrigerator</p> <p>shots of Sabrina using brace to turn off light switch</p>	<p>That's an idea that appeals to Sabrina. Typically, survivors only have a few months to show improvement in their arms, or doctors often give up on any kind of improvement. But this, could change that. :12 / 1:25</p>
<p>Sabrina (CG'd earlier) 1.14.20 - 1.14.28</p>	<p>"They call that plateauing. And I believe that, if there's something there to work with, you can always move past the plateauing." :08 / 1:33</p>
<p>Shots of Sabrina with Dr. Page fitting device</p>	<p>At Ohio State Wexner Medical Center, this is Clark Powell reporting. :04 / 1:37</p>
<p>ANCHOR TAG</p>	<p>The study with the so-called bionic arm is being funded by the National Institutes of Health.</p> <p>Doctors say early test results show that, with repeated use with this device, some stroke patients may regain at least some movement in their arms.</p>
<p>VIEWER INFORMATION</p>	<p>IF YOU'D LIKE MORE INFORMATION GO TO THE OHIO STATE UNIVERSITY MEDICAL CENTER WEBSITE www.medicalcenter.osu.edu AND CLICK ON "NEWS & MEDIA ROOM."</p>
<p>References -</p>	<p>*<i>Hemiparesis</i>, National Stroke Association, December 2011. Online: http://www.stroke.org/site/PageServer?pagename=hemiparesis</p>

	Extra Bites
CG: Stephen Page, PhD The Ohio State University Wexner Medical Center	1.01.05 “What this device enables us to do is detect their movements, their <i>attempts</i> to move with the arm, and magnify those. 1.01.12
CG: Stephen Page, PhD The Ohio State University Wexner Medical Center	1.01.40 “We think that through repetitive use of the device that the brain is actually re-wired, it’s called neuroplasticity, and through that neuroplasticity, through that repetition, we can actually restore movement. So far our preliminary studies have suggested that.” 1.01.54 1.05.55 “These folks are usually not provided with a lot of rehabilitation, there’s just not been a lot of options for this population in the past, so this is exciting.” 1.06.04
CG: Sabrina Pridham Stroke survivor	1.10.36 “Thanks goodness the neurologist who was on call immediately knew what happened. It’s extremely rare to have this type of stroke. Only 5% survive.” 1.10.44 1.12.01 “I went through physical therapy, speech therapy as well as learning how to walk again, of course, some cognitive therapy.” 1.12.09 1.13.23 “I was very surprise at how easy it was to use. Simply because all it needed was a small message from the brain, and immediately responded.” 1.13.31
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