



Tremor-Cancelling Spoon Gives Patients Back Their Independence

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In an **episode** on Zack Collie's YouTube channel, he demonstrates how difficult it is for him to eat yogurt with a regular spoon. Zach is a quadriplegic, and like millions of people who suffer from movement disorders, Zach has trouble with everyday tasks, including feeding himself.

In the second part of his video, Zach shows us how much easier it is for him to use a different kind of spoon—one that is attached to his wrist and counters his sometimes sporadic hand movements. He goes on to show us that he can even eat cereal with this new spoon without spilling the milk.

The spoon, sold under the brand name Liftware, was developed by Anupam Pathak who got the idea in graduate school when he was studying stabilizing technologies for soldiers' weapons, cameras, and consumer electronics.

After Pathak completed his Ph.D., neurologists put him in contact with patient advocacy groups for essential tremor and Parkinson's disease, conditions that together affect tens of millions of people worldwide.

Pathak says it was seeing patients struggle with everyday tasks that inspired him to start his company Lynx Design with the goal of prolonging independence and dignity in patients living with movement disorders.

In 2010 Pathak was awarded a Phase I Small Business Innovation Research grant from the National Institute of Neurological Disorders and Stroke

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(NINDS), which he says allowed him to focus solely on developing his Liftware technology. “Without the grants, I don't think [the company founding] would have happened at all,” Pathak says.

Aside from helping to establish the motor technology that actively offsets shaking, Pathak says the Phase I grant also positioned the company well for the Phase II SBIR grant they received from the NINDS in 2011, which enabled

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Technology

Research Tool

Primary Institute

Neurological Disorders and
Stroke (**NINDS**)

Project Details from NIH RePORTER

Lift Labs

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the company to start manufacturing Liftware utensils. Pathak says the NIH commercialization assistance program, which provides startup businesses with a mentor, helped the company stay focused.

In 2014, Liftware was acquired by Google, which Pathak says was aided by NIH support. After the acquisition, the Liftware team invented a **new utensil with self-leveling technology** to aid patients with other types of movement disorders, such as cerebral palsy and Huntington's disease.

Today, hundreds of thousands of Liftware utensils have been distributed. And though the acquisition by Google helped reduce the cost of the utensils by almost \$100, the products can still be cost-prohibitive. Recently, the pharmaceutical company Teva **purchased a thousand devices and donated them** to the Huntington's Disease Society of America.

Pathak and the company are currently working on driving down the cost of Liftware even more, and with philanthropic foundations to distribute the product more widely. "Our goal right now is to just get [Liftware to] whoever needs one."

