Devastating accident inspires wearable device to monitor health

TAKING CHARGE OF WELLNESS

Lindsay Purchase

It was May 15, 2007. Hardy Premsukh had everything going for him. He was up for promotion at his Auto Trader job and was about to start a master's degree at the University of Guelph.

And then everything came to a devastating halt.

A storm brought a car dealership sign crashing down on Premsukh, leaving him with a serious head and neck injury that kept him off work for five years. He was prescribed multiple medications for chronic headaches, which left him groggy but didn't ease his symptoms.

"I was going downhill fast," Premsukh says.

A series of health professionals were unable to improve his condition, until Premsukh saw a doctor who suggested incorporating relaxation techniques into his treatment.

This holistic approach gradually began to help. And this inspired Premsukh to develop a product to help people monitor stress and other health factors in a comprehensive way. FlourishiQ was born, with Premsukh as CEO.

"We want to be one of those companies that really pioneers this idea …. Here is medical-grade data you're getting from clinically validated instruments — wearable devices that can help the average person," he says.

The product, which is currently in testing, is a flexible patch that sticks to the body and collects information on cardiorespiratory fitness, physiological stress, sleep patterns and more.

The data will be sent to the cloud via a phone app and analyzed. Reports will give the user detailed health information and show events that may be causing stress, as

MATHEW MCCARTHY, RECORD STAFF

Hardy Premsukh founded FlourishiQ after a devastating head and neck injury that made it difficult for him to work.

Hardy Premsukh, founder and CEO of FlourishiQ, shows an illustration of a wearable wireless patch that transmits physiological information to a smartphone.

well as how that stress is impacting the individual.

"How is your stress affecting your ability to sleep? How is your lack of a good night's sleep affecting your performance and your energy level and so forth?" Premsukh explains.

The app's intervention-management system will help users act on the data they're receiving, coaching them to take a walk or meditate, for example.

Ben Gottlieb, a retired applied social psychologist at the University of Guelph, is helping FlourishiQ identify coping mechanisms to suggest to users when the patch detects stress.

"We don't get prescriptive, but we do say, 'Here's a variety of coping responses and personality characteristics that we think are important to buffer or cushion the impact of stressors and build your resilience,' " Gottlieb explains.

FlourishiQ is also planning to provide a biological sample kit to allow users to collect their urine and saliva to receive a lab analysis of stress-related biomarkers. The goal is to get a baseline and then retest within four to six months to see if the app's interventions are working.

The company was incorporated in December 2014 and joined the Accelerator Centre's Momentum program in June 2015.

The company received AC Jumpstart funding and has a small angel investment, but Premsukh has largely been bootstrapping his way through. Finding investors who align with the company's vision is a priority moving forward.

Premsukh says the company will embark on beta testing this fall before launching an Indiegogo campaign. The campaign will promote the product and bring initial users and customers on board. The FlourishiQ kits will be shipped to these backers by mid-2017. The results will help the company expand its data and computational models in preparation for a strategic launch into the business-to-business market.

Premsukh has a team of seven and is partnered with the University of Waterloo's Games Institute with the aim of optimizing user engagement with its app.

There is strong competition in the market for wearable health devices, notably activity tracker FitBit. But FitBit focuses on step-counting, which Premsukh believes is an ineffective way to track fitness.

"We can accomplish more in less time because we're measuring cardiorespiratory fitness," he says.

The quantity and variety of person-alized, medical-grade data is what Premsukh says sets FlourishiQ apart. The product has been designed with Health Canada and U.S. Food and Drug Administration regulations in mind.

The estimated cost for the patch is under $350, plus monthly fees for data analysis.

"This is not about Hardy making a billion dollars, or a hundred million, or whatever the magic number is," Premsukh says. "I truly have this desire, this higher purpose, to actually do this to help the average person."

Gottlieb describes it as Premsukh's "life mission." "He's got a hell of a thing going and it's going to be amazing when he opens the doors," he adds.

Looking ahead, Premsukh thinks the corporate world will be a major target market. Stress impairs decision-making and keeps people off work, he explains. But it's more than just about helping businesses build their bottom line.

"We want to look at the well-being of their employees, and then we can give them insight into what to do, how to change their culture."

For Premsukh, success won't be measured in sales dollars. It's about helping people get to a state of "elevated well-being" — giving them the opportunity to flourish. ◼