

# News



Michelle Cardoso, a PhD candidate at UNB, is shown conducting lab tests on a seat prototype that could help end lower back pain for truck drivers and others who spend a lot of work time seated. PHOTO: SUBMITTED



As part of field tests, a truck driver sits on a prototype of a seat developed by Force 3 Innovations that will help those who sit for extended periods of time be more comfortable and not experience lower back pain. PHOTO: SUBMITTED

## UNB, Dieppe firm gear up to relieve pain for truckers

**LAVERNE STEWART**  
THE DAILY GLEANER

**FREDERICTON**— Long-haul truckers who experience back pain could soon benefit from a partnership between a New Brunswick company and the University of New Brunswick.

Currently, there are 3.5 million truck drivers in North America and up to 80 per cent of those drivers suffer from lower back pain.

Force 3 Innovations, a small company in Dieppe, has collaborated with the University of New Brunswick's kinesiology department in its development of seating that will take the pain out of driving for hours at a time for truckers or anyone who sits for many hours. Average seats aren't designed to meet

the physical needs of the majority of people. As a result, prolonged sitting results in lower back pain, sciatica and even herniated discs from poor back support.

Darrell Mullen, one of the company's founders, said it's developed a seat with four back panels that accommodate different areas of the spine and distribute weight load. It puts your pelvis in a neutral position which takes the pressure off your spine.

After the company designed its seat prototype, it called on UNB PhD candidate Michelle Cardoso to conduct field tests. In 2014, Cardoso took it to the University of Waterloo in Ontario where she studied 20 students who were asked to sit in the prototype chair and a popular seat used by many

trucking companies.

The students were asked to sit in a driving simulator for two hours while seated in both chairs.

"We found that the prototype provided better postural benefits," she said. "They also had lower rates of perceived discomfort."

In the second part of her research, she studied 20 truck drivers who suffer from back pain. The drivers were asked to drive for 90 minutes while seated in the prototype seat and then in a regular big-rig seat.

The majority of the truck drivers said they were in less pain and felt less pressure in their lower backs while seated in the prototype chair.

"They were very excited. More than 80 per cent of the drivers said they

preferred the prototype over the standard seat," Cardoso said.

The study also wanted to determine whether proper posture resulted in less cognitive fatigue.

"We actually found that it did."

For long-haul truckers, who can drive up to 13 hours per day, less fatigue means they're more alert and able to deal with the mental requirements of driving for many hours at a time.

Mullen said he's taken the project as far as he can and now requires partnership with industry to take it to the next level.

"We're currently working on that now," he said.

Mullen said the company is working with the trucking industry to develop the product further. He said the

possibilities are endless and the seat could eventually end up providing more comfort and less back problems for anyone who drives a vehicle or sits in office chairs for hours at a time.

"I don't really see where there's a loser in the deal," Mullen said.

Force 3 Innovations received \$100,000 funding from the New Brunswick Innovation Foundation.

He said he expects the seat could be on the market within the next two years, although he couldn't say whether it will be first made available to the trucking industry, public transit or elsewhere.

Mullen said he expects it could take up to five years before it will be available for the average driver or office worker.

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