

Exercise therapy for low back pain

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Low back pain (or lumbago) is a common ailment often triggered by something as simple as lifting a suitcase. What is the best way to remedy the situation? An exercise machine designed specifically for back muscles could be the solution according to a new study published in the *Journal of the American College of Sports Medicine*.

"If you want to bring about physiological change to help the development and [endurance](#) of back muscles, you must focus your training on those specific muscles and not other muscular groups such as hip extensors," says Christian Larivičre, a professor at the Institut de recherche Robert-Sauvé en santé et en sécurité du travail (IRSST), who conducted the study with Université de Montréal researchers Bertrand Arsenault, Rubens A. Da Silva, Sylvie Nadeau, André Plamondon et Roger Vadeboncoeur.

The investigation requested that subjects aged 18 to 65 - some healthy and others with [low back pain](#) - complete various exercises. Electromyography (EMG) sensors were used to measure the level of activity and fatigue in various muscles during the routine. "Thanks to this technique, we can target tired muscles which aren't yet showing a decrease in strength," says Larivičre.

Test subjects also used a machine designed for back exercises in a semi-sitting position. Results clearly showed that using this machine was beneficial. Using a cushion to stabilize the pelvis brought about a better response from the back muscles. In addition, extending the legs strengthened muscles. "Therefore, we can decrease the use of hip

muscles and in turn increase the use of the back muscles," says Larivičre.

Such exercises can only help reduce pain and disabilities caused by back pain, says Larivičre. He recommends those who suffer severe hurt begin with stretches on the ground with low to medium effort. "Progressively, the individual will gain confidence and can use machines that require superior strength," he says.

Larivičre highlights the fact that six out of 10 Quebecers will suffer from back pain in their lifetime. "Musculoskeletal disorders are a serious public health issue," says Larivičre. "They're also an economic problem. In 2007, back [pain](#) cost Quebec's Commission de la santé et de la sécurité du travail \$516 million in worker compensations."

Provided by University of Montreal

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