

# A new way to find out if back problems need surgery

November 18 2013, by Carolyn Monaghan

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(Medical Xpress)—Researchers from Perth and Germany have discovered that a technique commonly used in surgery on the brain is an excellent tool for determining if, and to which extent, surgery is needed for patients with lower back problems.

The international group found that measurement of pressure in the spinal canal improved the diagnostic accuracy compared to using Magnetic Resonance Imaging (MRI) and clinical examination alone. The report was published in leading orthopaedic journal, the *European Spine Journal*.

Associate Professor Markus Melloh from the Harry Perkins Institute of

Medical Research and The University of Western Australia said as people aged, degeneration caused changes to the [spine](#) which in turn caused the spinal canal to become narrower.

"However, not everyone with a narrowing of the spinal canal gets a condition known as [lumbar spinal stenosis](#) which means some elderly people experience symptoms such as pain, numbness, weakness or radiating leg pain while walking or during prolonged standing," Professor Melloh said.

"These symptoms can have a significant impact on everyday activities such as housework or shopping as well as on the ability to work."

Dr Thomas Barz, Chief Surgeon of Germany's Asklepios Hospital Uckermark, said current routine treatment of spinal stenosis was decompression [surgery](#).

"However, until now, even experienced surgeons had no way to find out to what extent and how many segments of the spine need to be treated through surgery," Dr Barz said.

In their study, the researchers inserted a catheter with a [pressure sensor](#) into the spinal canal and measured the spinal fluid pressure in patients with spinal stenosis as well as in a control group while both were having surgery. The new method has already been filed for a patent.

"We found that the pressure at the stenosis level in patients with [spinal stenosis](#) was three times higher than at unaffected levels in this patient group and compared to the control group, which makes this technique a very promising diagnostic tool for patients with problems of the lumbar spine," Professor Melloh said.

"It can even be used before surgery by inserting the catheter with the

pressure sensor through a needle into the [spinal canal](#). This might help to find out exactly which segments of the spine have been affected and to reduce the amount of time on the operating table, the number of days on sick leave and complications, which benefits both the patients and the taxpayer."

Provided by University of Western Australia

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