

## PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form ([see an example](#)) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below. Some articles will have been accepted based in part or entirely on reviews undertaken for other BMJ Group journals. These will be reproduced where possible.

### ARTICLE DETAILS

<b>TITLE (PROVISIONAL)</b>	Comparative Effectiveness of Microdecompression and Laminectomy for Central Lumbar Spinal Stenosis – An Observational Study
<b>AUTHORS</b>	Gulati, Sasha; Nerland, Ulf; Jakola, Asgeir; Solheim, Ole; Weber, Clemens; Rao, Vidar; Lønne, Greger; Solberg, Tore; Salvesen, Øyvind; Carlsen, Sven; Nygaard, Øystein

### VERSION 1 - REVIEW

<b>REVIEWER</b>	Mr Philip Sell Department of Orthopaedics University Hospitals of Leicester Leicester UK
<b>REVIEW RETURNED</b>	28-Dec-2013

<b>GENERAL COMMENTS</b>	<p>This is a paper on what they plan to do. It is not of interest to spinal surgeons or health economists in its current form. The data needs to be collected and analysed. I wish the authors luck in recruitment. If the purpose of submitting is for early suggestions on improvement in methodology I am happy to try and assist.</p> <p>The value of the study would be greater if they concentrated on single level stenosis and compared a segmental open decompression without a microscope sacrificing midline structures versus a microscope assisted decompression preserving midline structures.</p> <p>The definition of laminectomy is open to interpretation. For example an operation I would do only for a two level stenosis, that is L3/L4 and L4/L5 stenosis I would do an L4 laminectomy. The secondary outcomes that would improve value would be to have an accurate measure of pre op walking distance, and maybe you use a Zurich claudication score as an outcome measure. Compliance and questionnaire fatigue may become an issue.</p> <p>My only reason for rejecting is that I have no interest in a paper that describes what is going to be done, that is the easy part of research!. I wish to see results.</p> <p>I am a little confused by being asked to review this. I would be grateful for feedback as it is unusual to be asked to review a paper that describes a study methodology before it has results. If the intent is to have a 'peer review' of method and outcomes I have provided that, but the authors would do better to discuss that with the research group first.</p>
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<b>REVIEWER</b>	Suat Erol Celik Department of Neurosurgery, Okmeydanı Training and Research Hospital, Istanbul, Turkey
<b>REVIEW RETURNED</b>	18-Feb-2014

<b>GENERAL COMMENTS</b>	This is a study protocol, try to compare the effectiveness of microdecompression and laminectomy for central lumbar spinal stenosis. To increase the power of the study only one type of the microdecompression (bilateral or unilateral) should be studied since unilateral decompression may not decompress opposite foramen effectively. The follow up time is short for such kind of survey. Postoperative complaints and restenosis especially starts in 18-20 months after the operation. The follow up period should be more than 3 years. Sincerely yours.
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### VERSION 1 – AUTHOR RESPONSE

Dear Mr. Sell (reviewer #1),

Thank you for reviewing our manuscript. As you point out this is a research protocol. We believe there are several advantages by publishing a research protocol. It enables us to obtain constructive feedback from reviewers. Further, it enables readers to compare what was originally intended with what was actually done, thus preventing post-hoc revisions of study aims. Based on reports from the Norwegian Registry for Spine Surgery, it seems microdecompression and laminectomy are the most common surgical procedures for lumbar spinal stenosis. It is therefore natural to compare these two procedures in this study. In the analyses of primary and secondary outcome measures adjustments for the number of levels operated (one or two), age, body mass index, and preoperative ODI will be made. For some of the secondary outcome measures (duration of surgical procedure, length of hospital stays, complications), results from one-level and two-level decompressions will be analyzed, compared and presented separately. A study on an equivalent patient population showed a loss to follow-up of 22%. We agree that this represents a potential weakness of our study. This has already been addressed under "Study strengths and limitations". We agree that the Zurich claudications score is an interesting and relevant outcome measure. Unfortunately, this outcome measurement is not included in NORspine. However, ODI is a common and validated outcome measure in spine research.

Dear Dr. Celik (reviewer #2),

Thank you for reviewing our manuscript. Microdecompression can be performed using a bilateral or unilateral approach depending on the surgeon's preference and the individual patient's anatomy and symptoms. Unlike a decompressive laminectomy, the spinous process and the supra- and interspinous ligaments are left intact when performing both forms of microdecompression. We therefore believe it is natural to group the two forms of microdecompression together. You raise a concern that unilateral decompression may fail to alleviate the contralateral foramen. This is a question that warrants further research. Opinions are probably divided on this issue. However, this is also the reason for including central lumbar spinal stenosis in this study. Patients with isolated lateral recess stenosis or isolated foraminal stenosis will be excluded. We agree long-term follow-up would be very interesting in this patient population. However, the NORspine only follows patients for one year and we do not have approval to perform long-term follow-up. Compliance and questionnaire fatigue may naturally become a concern in a long-term study.