Outcome of an intensive multi-disciplinary active rehabilitation programme compared to surgery in patients with lumbar spinal stenosis - an upcoming PhD project.

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**Background**
Lumbar spinal stenosis (LSS) is a common degenerative condition among elderly people impacting mobility, physical activity in daily life and quality of life. There is currently no high-quality evidence on whether surgical or non-surgical treatment is a better approach for LSS.

**Aim**
To compare outcome of an intensive multi-disciplinary active rehabilitation programme with surgery in patients with LSS, and study factors associated with outcome.

**Objectives**
1. To compare changes in the two treatment arms on self-reported and performance-based walking capacity.
2. To determine, if any factors collected in the group receiving an intensive multi-disciplinary active rehabilitation programme are predictors for patient’s decision to postpone or not requesting surgery.

**Materials and Methods**
A randomized clinical trial (RCT) in which 252 patients 60+ years referred for surgery having LSS are randomly allocated to surgery or twelve weeks intensive multi-disciplinary active rehabilitation. Participants are evaluated at baseline, 6 and 12 months follow up.

**Inclusion criteria**
- 60+ years, LSS
- Surgical candidate
- Neurogenic claudication
- Walking distance 100-1000 meters
- ASA classification 1 & 2

**Exclusion criteria**
- Unable to understand, read and write Danish
- Prior back surgery
- Previous lower limb nerve injury
- Active psychiatric illness, mental retardation, impaired cognition

**Outcome measures**
**Primary outcome measures**
- Performance-based walking distance (Motorized Treadmill Test)
- Self-reported walking distance (Zurich Claudication Questionaire)

**Secondary outcome measures**
- Number of participants in the rehabilitation arm choosing surgery at 6 and 12 months follow up
- Number of participants in the rehabilitation arm not requesting surgery at 12 months follow up

**Potential predictor variables**
- General self-efficacy (General Self-Efficacy Scale)
- Cardiovascular fitness (Aastrand Submaximal Cycle Test)
- Demographics: age, sex, duration of symptoms, smoking status
- Magnetic Resonance Imaging (MRI) findings related to LSS

**Intervention**

**Group A: Surgical treatment (usual practice)**
- Posterior decompressive laminectomy
- Follow up with physiotherapist 6 weeks post surgery
- Rehabilitation plan in the municipality setting

**Group B: Intensive multi-disciplinary active rehabilitation (intervention)**
- Focus on patient learning and empowerment in the framework of WHO’s International Classification of Functioning, Disability and Health (ICF)
- Multi-disciplinary rehabilitation team
- Involve social, physical and personal contexts
- Rehabilitation at the Danish Rheumatism Association’s Rehabilitation Centre SANO

Intensive multi-disciplinary active rehabilitation programme
- a 12 week intermittent “in clinic” / “at home” set up