# BEST PRACTICES IN THE REHABILITATION OF SINGLE- AND DOUBLE LEVEL LUMBAR FUSION SURGERY: RESULTS OF A MODIFIED DELPHI STUDY

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Summary

Extensive variation and uncertainty in rehabilitation of lumbar fusion calls for consensus on the best rehabilitation pathway

In this modified Delphi study, expert consensus on best practices in the rehabilitation of single- and double level lumbar fusion surgery for degenerative conditions was achieved

### Study design

### Multidisciplinary expert panel

- 31 Belgian and Dutch experts, clinical and/or academic:
- 5 Neurosurgeons
- 5 Orthopaedic surgeons
- 8 Physiotherapists
- 5 Psychologists

2 Nurses

- 1 Physician assistant
- 1 General practicioner 1 Clinical epidemiologist
- 3 Physical and Rehabilitation
- Medicine specialists

### 4-round modified Delphi study

- 3 online rounds (anonymous, iterative, feedback on group scoring), followed by 1 in-person focus group
- Response rates (round 1-2-3-4): 100%-87%-87%-55%
- Followed the CREDES guidelines,
- Approved by KU/UZ Leuven Ethics Committee research
- Registered at ClinicalTrials.gov-NCT03427294

### Consensus

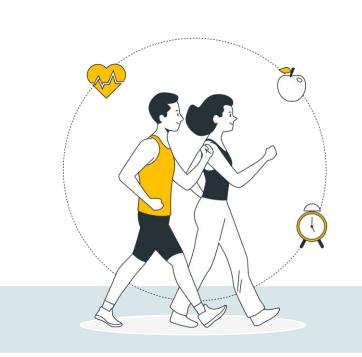
Concensus was achieved if at least 75% of experts rated a statement as 'important' to be integrated in an optimal rehabilitation pathway

### Best practices in the pre-, peri- and postoperative rehabilitation of single- and double-level lumbar fusion: 122 statements



### Therapeutic alliance

- Shared-decision for lumbar fusion surgery
- Uniform communication
- Interdisciplinary discussion
- Guidance by case manager



### Preoperative phase

### Promoting healthy lifestyle

Physical activity Smoking cessation Weight reduction (BMI<30)

### Individual physiotherapy & information in group (+multidisciplinary therapy on indication)

Education (including pain education) Teaching postoperative transfers Patient-specific ergonomic advice **Encourage physical activity** 



### Discharge criteria Controlable pain

Clean wound Basic ADL Stairs if necessary in home situation



# Hospitalisation phase

### Early mobilisation, daily physiotherapy (+multidisciplinary therapy on indication)

Education (including pain education) Functional movements (standing, transfers, gait rehabilitation, climbing stairs) Patient-specific advices for at home Encourage physical activity



### Lumbar fusion surgery



### Postoperative phase

### Follow-up

Follow-up by general practitioner One control consultation with the treating surgeon Good extramural communication

### Referral to skilled physiotherapist based on team assesment (+multidisciplinary therapy on indication)

Education; optimalization of posture and movement control (± cognitive behavioral aspects, ergonomic advice, analyzing and treating maladapitve movement patterns); cardiovascular training; functional training of activities; optimalization of participation,

### Which musculoskeletal loading of the vertebral column is allowed?

- Low to moderate (e.g. walking, cycling, light household tasks, picking up something): immediately postoperatively
- High (e.g. certain sporting activities, heavy lifting): from 12 weeks onwards on the basis of a favorable recommendation by the treating physician
- Postoperative bracing should not be prescribed

## Patient's perspective on this expert-consensus?

- 9 patients that underwent lumbar fusion surgery
- highlighted a need for early guidance in return-to-work
- agreed on the beneficial effect of uniform communication, and case manager guidance

# Clinical implications?

- These consensus statements form the building blocks for developing and implementing a streamlined, much-needed rehabilitation pathway.
- Patient's perspective shows an additional need for early guidance in return-to-work in this rehabilitation pathway.