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Discogenic low back pain

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**DISCOGENIC LOW BACK PAIN
LUMBAR SPONDYLODESIS REVISITED**

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LUMBAR SPONDYLODESIS REVISITED**

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Contents

Preface and aim of this study	1
Chapter 1 General introduction	3
1.1 Classifications of low back pain	3
1.2 Epidemiology of low back pain	7
1.3 Clinical anatomy of the lumbar spine	13
1.4 The lumbar spine and low back pain	18
Chapter 2 The origin of low back pain	23
2.1 Neuroanatomical considerations in low back pain	24
2.1.1 Innervated structures	24
2.1.2 The pain pathway	26
2.2 Spinal degeneration and low back pain	29
2.3 Summary	32
Chapter 3 Innervation of “painful” lumbar discs	37
3.1 Introduction	37
3.2 Materials and methods	38
3.3 Results	40
3.4 Discussion	44
Chapter 4 Interbody fusion for chronic low back pain	51
4.1 Historical review of spinal fusion	51
4.2 Rates of spinal fusion	53
4.3 Biomechanical considerations of lumbar spinal fusion	54
4.3.1 Biomechanics of the intervertebral disc	54
4.3.2 Lumbar spinal fusion and biomechanics	56
4.4 Surgical techniques	56
4.4.1 Posterior lumbar interbody fusion	57
4.4.2 Anterior lumbar interbody fusion	57
4.4.3 Minimal invasive anterior lumbar interbody fusion (mini-ALIF)	58
4.4.4 Spinal instrumentation	59
4.4.5 Post-operative care	60
4.4.6 Technique related complications	60
4.5 Bone grafting	61
4.6 Conclusions	61
Chapter 5 Outcome of interbody fusion in selected patients with degenerative low back pain	67
5.1 Introduction	67
5.2 Materials and methods	68
5.3 Results	70
5.3.1 Demographic data and procedures	70

5.3.2	Outcome	72
5.3.2.1	Outcome: clinical	72
5.3.2.2	Outcome:fusion	72
5.3.3	Complications	72
5.4	Discussion and conclusions	75
Chapter 6 A 10- to 20-year follow-up of lumbar interbody fusion for degenerative chronic low back pain		81
6.1	Introduction	81
6.2	Materials and methods	82
6.3	Results	82
6.4	Discussion and conclusions	84
	Appendix	86
Chapter 7 A fast and accurate technique to evaluate surgical lumbar fusion		89
7.1	Introduction	89
7.2	Materials and methods	90
7.3	Results	95
7.3.1	Standardized cylinder rotation	95
7.3.2	Soft-bone experiments	95
7.4	Discussion and conclusions	96
Chapter 8 General discussion		99
Summary		103
Samenvatting		106
Nawoord		109
Curriculum vitae		110

PREFACE AND AIM OF THIS STUDY

Although low back pain has been reported since many centuries, this complex entity of pathophysiological, biomechanical, psychological and social factors, in fact, can be considered as a post- World War II phenomenon in Western society. The total number of people reported suffering from low back pain has increased exponentially since 1945. Currently, the inability to work as a result of low back pain appears to be socially accepted and the costs of unemployment compensation are rising to incredible extents. In The Netherlands, in 1991, the total costs involved were estimated at 1.7% of the Gross National Product¹. The majority of payments are attributed to people suffering from chronic disabling low back pain.

Over the years, many studies, both basic and clinical, have been conducted aiming at understanding the pathophysiological mechanisms underlying chronic disabling low back pain. Several factors appear to be involved to some extent but an over-all satisfying pathogenic theory has not been presented yet. The lack of understanding about the importance of each factor involved and moreover their mutual interaction renders the development of a scientifically based therapeutic regimen futile. On a “try and error” base a wide variety of treatment modalities both non-invasive and invasive is (still) being applied to affected people. Although mostly without satisfying result, the persistence of this variety of treatments further underlines this conclusion.

By means of literature-, experimental-, and clinical studies we try to add to better insights in the mechanisms leading to severely disabling chronic low back pain and its current and future (surgical) management. The major part of this study including the patient analysis and treatment, and the lab investigations on disc innervation have been performed at the Leiden University Medical Center, Department of Neurosurgery.

The aim of this study is to:

1. Review what is currently known about low back pain and its relevant anatomical structures (Ch 1 and Ch 2).
2. Study the degenerated intervertebral disc: are there arguments to consider it as a source of chronic low back pain (CH 3)?
3. Evaluate a combination of particular criteria in order to select patients with discogenic chronic low back pain for surgical treatment (Ch 5).
4. Evaluate the method of interbody lumbar spinal fusion in these patients with presumed discogenic chronic disabling low back pain (Ch 4 and Ch 5) and evaluate the long-term clinical results (Ch 6).
5. Improve the radiological evaluation of lumbar spinal fusion results (Ch 7).

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