



**Universiteit  
Leiden**  
The Netherlands

**Tubular discectomy for the treatment of lumbar disc herniation :  
new standard or transient fashion? : Results of a double-blind  
randomised controlled trial**

Arts, M.P.

**Citation**

Arts, M. P. (2010, September 23). *Tubular discectomy for the treatment of lumbar disc herniation : new standard or transient fashion? : Results of a double-blind randomised controlled trial*. Retrieved from <https://hdl.handle.net/1887/15975>

Version: Corrected Publisher's Version

License: [Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

Downloaded from: <https://hdl.handle.net/1887/15975>

**Note:** To cite this publication please use the final published version (if applicable).

# **Tubular Discectomy for the Treatment of Lumbar Disc Herniation; New Standard or Transient Fashion?**

**Results of a Double-Blind Randomised Controlled Trial**

**Mark P. Arts**

ISBN/EAN 978-90-9025625-2

Copyright © 2010 M.P. Arts

No part of this thesis may be reproduced, stored in a retrieval system of any nature, or transmitted in any form or by any means, without permission of the author, or the copyright-owing journals for previously published chapters.

Cover: Perito Moreno, Patagonia

Lay-out: Legatron Electronic Publishing, Rotterdam

Printing: Ipskamp Drukkers BV, Enschede

**Tubular Discectomy for the Treatment of Lumbar Disc Herniation;  
New Standard or Transient Fashion?**

**Results of a Double-Blind Randomised Controlled Trial**

Proefschrift

ter verkrijging van de graad van Doctor  
aan de Universiteit Leiden,  
op gezag van  
Rector Magnificus prof. mr. P.F. van der Heijden,  
volgens besluit van het College voor Promoties  
te verdedigen op donderdag 23 september 2010  
klokke 13.45 uur

door

**Mark Paul Arts**

Geboren te Woerden  
in 1970

## PROMOTIECOMMISSIE

### Promotores:

Prof. dr. W.C. Peul

Prof. dr. R. Brand

### Overige leden:

Dr. R.H.M.A. Bartels

Prof. dr. J. Goffin

Prof. dr. F.W. Jansen

Prof. dr. B.W. Koes

Dr. P.J. Nederkoorn

Prof. dr. R.G.H.H. Nelissen

Prof. dr. F.C. Öner

Prof. dr. R.T.W.M. Thomeer

### Externe referent:

Prof. dr. E.J. Carragee

### Paranimfen:

Ger Arts

Jeroen Hertog

# Contents

<b>Chapter 1</b>	Introduction	<b>7</b>
<b>Chapter 2</b>	Survey on sciatica among spine surgeons	<b>17</b>
<b>Chapter 3</b>	Design and protocol of the trial	<b>39</b>
<b>Chapter 4</b>	One-year results of the trial	<b>55</b>
<b>Chapter 5</b>	Cost utility analysis	<b>75</b>
<b>Chapter 6</b>	Subgroup analysis	<b>93</b>
<b>Chapter 7</b>	Two-year results of the trial	<b>113</b>
<b>Chapter 8</b>	Creatine phosphokinase as an indicator of muscle injury	<b>133</b>
<b>Chapter 9</b>	Quantification of muscle injury	<b>145</b>
<b>Chapter 10</b>	Synthesis and general discussion	<b>161</b>
<b>Chapter 11</b>	Summary	<b>175</b>
<b>Chapter 12</b>	Samenvatting	<b>181</b>
	List of Publications	<b>187</b>
	About the author	<b>191</b>
	Acknowledgements	<b>193</b>