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**Total Knee Arthroplasty**

A Guide to Get Better Performance

Johan Bellemans (Editor)

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# Total Knee Arthroplasty

A Guide to Get Better Performance

With 323 Figures, 137 in Color, and 39 Tables

 Springer

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# Preface

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Few domains in orthopedics have evolved so dramatically over the past decades as our knowledge and understanding of knee physiology and knee replacement surgery.

Long ago are the days that hinged knees or unconstrained flat on flat components with gamma irradiated in air polyethylene were the standard. Since those days, an unstoppable evolution has taken place towards refinement and better results. Some designs and theories have thereby withstood the test of time better than others, while some debates have been significant. Cemented or uncemented fixation, resurfacing of the patella and mobile or fixed bearings, are some of the issues that are still open today. Despite the fact that some issues have dominated the literature and the public forum during the eighties and nineties, most of us have realised in the meantime that these issues are less fundamental in our quest towards optimal knee joint restoration.

In addition, we have discovered previously neglected or unknown aspects. New terminology and technology has emerged. Paradoxical motion, lateral lift off, asymmetrical roll-back were never heard of during the nineties, and are public domain in today's knee forum. Computer assisted surgery, minimal invasive technology, cross-linked polyethylene and ceramics have entered the world of knee surgeons. All with the same goal in mind; to optimize the performance of the knees we treat.

This book attempts to assemble all these evolutions and new insights into a standard work, in an attempt to provide the reader with a current update on the most modern views on knee arthroplasty.

Experts from all over the world have contributed to achieve this goal. All have published extensively in peer-reviewed journals, and have taken the opportunity to bundle their knowledge in the allocated chapter in this book, thereby providing the reader with a unique work summarising the current scientific knowledge on knee arthroplasty.

The editors are grateful to them for their excellent contributions to this work, and hope with all of those who were involved, that this book may serve as a modern basis for achieving better performance in knee arthroplasty.

Finally, the editors would like to express their special and sincere gratitude to the publishing editor Thomas Guenther from Springer Verlag for his competent and professional support, which allowed us to present this work according to the highest standards available today in medical literature. Thomas Guenther, who always spoke about this work as his baby, suddenly passed away from us during the finalizing weeks of this work.

This book will therefore be the last book that Thomas made. Together with many surgeons who published for Springer-Verlag, Thomas will stay in our minds as a hard and dedicated worker, with a perpetual drive towards perfection. The success of this work is therefore also a last homage to Thomas Guenther.

The Editors

Johan Bellemans  
May 2005

Michael D. Ries

Jan M. K. Victor

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---

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# Sections

- I      Essentials**  
- 1
- II     Past Failures**  
- 43
- III    Kinematics**  
- 113
- IV    Surgical Technique**  
- 163
- V     Technology**  
- 239
- VI    Implant Design**  
- 289
- VII   Materials**  
- 341
- VIII The Wider Scope**  
- 379
- IX    Future Perspectives**  
- 399

# Table of Contents

Preface .....	V	16	Lessons Learned from Cementless Fixation ..	101
List of Contributors .....	XV		<i>G. L. Rasmussen</i>	
		17	Lessons Learned from Mobile-Bearing Knees .....	107
			<i>J. V. Baré, R. B. Bourne</i>	

## I Essentials

1	Arthritis of the Knee: Diagnosis and Management .....	3
	<i>F. P. Luyten, R. Westhovens, V. Taelman</i>	
2	Knee Arthroplasty to Maximize the Envelope of Function .....	14
	<i>S. F. Dye</i>	
3	Functional Anatomy of the Knee .....	18
	<i>D. G. Eckhoff</i>	
4	Alignment of the Human Knee; Relationship to Total Knee Replacement .....	25
	<i>D. S. Hungerford, M. W. Hungerford</i>	
5	Functional In Vivo Kinematic Analysis of the Normal Knee .....	32
	<i>A. Williams, C. Phillips</i>	
6	Gait Analysis and Total Knee Replacement ...	38
	<i>T. P. Andriacchi, C. O. Dyrby</i>	

## II Past Failures

7	The Polyethylene History .....	45
	<i>A. Bellare, M. Spector</i>	
8	Failures with Bearings .....	51
	<i>K. J. Bozic</i>	
9	Failures in Patellar Replacement in Total Knee Arthroplasty .....	57
	<i>J. A. Rand</i>	
10	Experience with Patellar Resurfacing and Non-Resurfacing .....	65
	<i>H. U. Cameron</i>	
11	Failure in Constraint: "Too Much" .....	69
	<i>N. Wülker, M. Lüdemann</i>	
12	Failure in Constraint: "Too Little" .....	74
	<i>F. Lampe, E. Hille</i>	
13	Surface Damage and Wear in Fixed, Modular Tibial Inserts: The Effects of Conformity and Constraint .....	85
	<i>J. D. Haman, M. A. Wimmer, J. O. Galante</i>	
14	Failure in Cam-Post in Total Knee Arthroplasty .	90
	<i>R. B. Bourne, J. V. Baré</i>	
15	Flexion Instability .....	96
	<i>J. Bellemans</i>	

## III Kinematics

18	Understanding and Interpreting In Vivo Kinematic Studies .....	115
	<i>S. A. Banks</i>	
19	The Importance of the ACL for the Function of the Knee: Relevance to Future Developments in Total Knee Arthroplasty ..	121
	<i>A. M. Chaudhari, C. O. Dyrby, T. P. Andriacchi</i>	
20	Kinematics of Mobile Bearing Total Knee Arthroplasty .....	126
	<i>D. A. Dennis, R. D. Komistek</i>	
21	Cruciate Deficiency in the Replaced Knee ....	141
	<i>J. Victor</i>	
22	Kinematic Characteristics of the Unicompartamental Knee .....	148
	<i>J. N. Argenson, R. D. Komistek, D. A. Dennis</i>	
23	In Vitro Kinematics of the Replaced Knee ....	152
	<i>S. Incavo, B. D. Beynon, K. Coughlin</i>	
24	The Virtual Knee .....	159
	<i>B. W. McKinnon, J. K. Otto, S. McGuan</i>	

## IV Surgical Technique

25	Optimizing Alignment .....	165
	<i>M. A. Rauh, W. M. Mihalko, K. A. Krackow</i>	
26	Assess and Release the Tight Ligament .....	170
	<i>L. A. Whiteside</i>	
27	The Technique of PCL Retention in Total Knee Arthroplasty .....	177
	<i>T. J. Williams, T. S. Thornhill</i>	
28	Posterior Cruciate Ligament Balancing in Total Knee Arthroplasty with a Dynamic PCL Spacer .....	182
	<i>A. B. Wymenga, B. Christen, U. Wehrli</i>	
29	Achieving Maximal Flexion .....	188
	<i>J. Bellemans</i>	
30	Assess and Achieve Maximal Extension .....	194
	<i>R. W. Laskin, B. Beksac</i>	

31 Understanding the Rheumatoid Knee ..... 198  
*K. K. Anbari, J. P. Garino*

32 Management of Extra-Articular Deformities  
in Total Knee Arthroplasty ..... 205  
*K. G. Vince, V. Bozic*

33 Use of a Tensiometer at Total Knee  
Arthroplasty ..... 212  
*T. J. Wilton*

34 Specific Issues in Surgical Techniques for  
Mobile-Bearing Designs ..... 217  
*P. T. Myers*

35 Optimizing Cementing Technique ..... 223  
*G. R. Scuderi, H. Clarke*

36 Assessment and Balancing of Patellar  
Tracking ..... 228  
*J. H. Lonner, R. E. Booth, Jr.*

37 Specific Issues in Surgical Techniques for  
Unicompartmental Knees ..... 234  
*L. Pinczewski, D. Kader, C. Connolly*

## V Technology

38 Computer-Assisted Surgery: Principles ..... 241  
*J. B. Stiehl, W. H. Konermann, R. G. Haaker*

39 Computer-Assisted Surgery:  
Coronal and Sagittal Alignment ..... 247  
*J. Victor*

40 Computer-Assisted Surgery and Rotational  
Alignment of Total Knee Arthroplasty ..... 254  
*G. M. Sikorski*

41 Imageless Computer-Assisted  
Total Knee Arthroplasty ..... 258  
*J.-Y. Jenny*

42 Robotics ..... 264  
*J. Bellemans*

43 The Unicompartmental Knee: Minimally  
Invasive Approach ..... 270  
*T. V. Swanson*

44 Minimally Invasive: Total Knee Arthroplasty . 276  
*S. B. Haas, A. P. Lehman, S. Cook*

45 The Electronic Knee ..... 282  
*C. W. Colwell, Jr., D. D. D'Lima*

## VI Implant Design

46 Bicruciate-Retaining Total Knee Arthroplasty .. 291  
*D. Jacofsky*

47 Bearing Surfaces for Motion Control  
in Total Knee Arthroplasty ..... 295  
*P. S. Walker*

48 The High-Performance Knee ..... 303  
*M. D. Ries, J. Bellemans, J. Victor*

49 Deep Knee Flexion in the Asian Population . 311  
*M. Akagi*

50 Fixed-Bearing Unicompartmental  
Knee Arthroplasty ..... 317  
*P. Cartier, A. Khefacha*

51 Mobile-Bearing Unicompartmental  
Knee Arthroplasty ..... 322  
*D. G. Murray*

52 Metallic Hemiarthroplasty of the Knee ..... 326  
*R. D. Scott, R. D. Deshmukh*

53 Patellofemoral Arthroplasty ..... 329  
*M. M. Glasgow, S. T. Donell*

54 Current Role of Hinged Implants ..... 335  
*H. Reichel*

## VII Materials

55 Biology of Foreign Bodies:  
Tolerance, Osteolysis, and Allergy ..... 343  
*S. Nasser*

56 Conventional and Cross-Linked Polyethylene  
Properties ..... 353  
*L. A. Pruitt*

57 Wear in Conventional and Highly Cross-Linked  
Polyethylene ..... 361  
*M. D. Ries*

58 Modular UHMWPE Insert Design  
Characteristics ..... 365  
*A. S. Greenwald, C. S. Heim*

59 Oxidized Zirconium ..... 370  
*G. Hunter, W. M. Jones, M. Spector*

## VIII The Wider Scope

60 Patient Selection and Counseling ..... 381  
*C. Mahoney, K. L. Garvin*

61 Pain Management ..... 384  
*T. Deckmyn*

62 Rehabilitation Following Total Knee  
Arthroplasty ..... 388  
*P. Hernigou, A. Poignard, A. Nogier*

63 Sports and Activity Levels after Total Knee  
Arthroplasty ..... 393  
*P. Aglietti, P. Cuomo, A. Baldini*



## IX Future Perspectives

64	Conclusions .....	401
	<i>M. D. Ries</i>	
	Subject Index .....	405

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# I Essentials

- 1      **Arthritis of the Knee: Diagnosis and Management**    – 3  
F. P. Luyten, R. Westhovens, V. Taelman
- 2      **Knee Arthroplasty to Maximize the Envelope of Function**    – 14  
S. F. Dye
- 3      **Functional Anatomy of the Knee**    – 18  
D. G. Eckhoff
- 4      **Alignment of the Normal Knee;  
Relationship to Total Knee Replacement**    – 25  
D. S. Hungerford, M. W. Hungerford
- 5      **Functional In Vivo Kinematic Analysis of the Normal Knee**    – 32  
A. Williams, C. Phillips
- 6      **Gait Analysis and Total Knee Replacement**    – 38  
T. P. Andriacchi, C. O. Dyrby