



**Auflage:** 1st Edition 2015  
**Seiten:** 608  
**Abbildungen:** 2198  
**Einband:** Hardcover  
**ISBN:** 978-0-86715-651-5  
**Artikelnr.:** 7415  
**Erschienen:** August 2015

**Quintessence Publishing Company, Ltd.**

📍 Grafton Road  
 KT3 3AB New Malden, Surrey  
 Vereinigtes Königreich von Großbritannien und  
 Nordirland

☎ +44 (0)20 8949 6087

📠 +44 (0)20 8336 1484

✉ [info@quintpub.co.uk](mailto:info@quintpub.co.uk)

🌐 <https://www.quintessence-publishing.com/gbr/en>

## Buch-Information

**Autoren:** Charles J. Burstone / Kwangchul Choy  
**Titel:** The Biomechanical Foundation of Clinical Orthodontics  
**Kurztext:**

All orthodontic treatment modalities can be improved by the application of sound biomechanics, yet most orthodontic therapy today is delivered without consideration of forces or force systems. Orthodontic hardware itself is only a means to an end point, such as tooth alignment, bone remodeling, or growth modification; the orthodontist can achieve these goals only by manipulating forces, regardless of the techniques used. Written by a world-renowned authority on the subject, this book teaches biomechanics in an easy-to-understand and engaging way, using universal examples outside orthodontics to illustrate basic force systems and how they function and then applying these principles to the practice of clinical orthodontics. The authors cover all of the force systems an orthodontist needs to understand to deliver effective treatment, explaining how each can be controlled and manipulated and demonstrating the forces at work through highly instructive 3D illustrations. Most chapters conclude with the presentation of several study problems, allowing the reader an opportunity to practice developing treatment plans using the biomechanical concepts discussed in each chapter. (Answers are provided at the end of the book.) This book is sure to be an instant classic.

### Contents

- Part I. The Basics and Single-Force Applications
  - Chapter 01. Why We Need Biomechanics
  - Chapter 02. Concurrent Forces Systems
  - Chapter 03. Nonconcurrent Force Systems and Forces on a Free Body
  - Chapter 04. Headgear
  - Chapter 05. The Creative Use of Maxillomandibular Elastics
  - Chapter 06. Single Forces and Deep Bite Correction by Intrusion
  - Chapter 07. Deep Overbite Correction by Posterior Extrusion
  - Chapter 08. Equilibrium
- Part II. The Biomechanics of Tooth Movement
  - Chapter 09. The Biomechanics of Altering Tooth Position
  - Chapter 10. 3D Concepts in Tooth Movement
  - Chapter 11. Orthodontic Anchorage
  - Chapter 12. Stress, Strain, and the Biological Response
- Part III. Advanced Appliance Therapy
  - Chapter 13. Lingual Arches
  - Chapter 14. Extraction Therapies and Space Closure
  - Chapter 15. Forces From Wires and Brackets
  - Chapter 16. Statically Determinate Appliances and Creative Mechanics
  - Chapter 17. Biomechanics and Treatment of Dentofacial Deformity
  - Chapter 18. The Biomechanics of Miniscrews: From Single-Tooth Control to Total-Arch Movement
- Part IV. Advanced Mechanics of Materials
  - Chapter 19. The Role of Friction in Orthodontic Appliances
  - Chapter 20. Properties and Structures of Orthodontic Wire Materials
  - Chapter 21. How to Select an Archwire

**Fachgebiet(e):** Kieferorthopädie