

# Biomechanics in Orthodontics: Principles and Practice

# **Biomechanics** **IN Orthodontics**

## PRINCIPLES AND PRACTICE

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# Preface

Once comprehensive diagnosis and treatment planning have set the stage for initiating treatment procedures, appliance design and systems have to be developed to achieve treatment goals. Correct application of the principles of biomechanics assists in the selection of efficient and expedient appliance systems.

Over the last three decades, there has been an explosion in the development of technology related to orthodontics. New materials and designs for brackets, bonding, and wires have combined to create a nearly infinite number of possibilities in orthodontic appliance design. As these new materials are brought together in

the configuration of orthodontic appliances, it is necessary to understand and apply the principles of biomechanics for a successful and efficient treatment outcome. Lack of proper understanding may not only set up inefficient force systems but also cause collateral damage to the tissues. The path to successful treatment is through good knowledge of biomechanics.

This book is written with the purpose of introducing a student of orthodontics to the evolving technology, material properties, and mechanical principles involved in designing orthodontic appliances.