

# Contents

<b>Introduction – Definitions and Purpose</b>	7
<b>Part 1: Functional Effects of Hypokinesia</b>	19
Forced Hypokinesia and Discomfort (Petr Štátný, Karel Jelen, František Lopot)	20
Motor Vehicle Driving (Libor Soumar, Eva Tlapáková, Petr Kubový, Karel Jelen)	35
The Effect of Hypokinesia on Skeletal Muscles and Control of Their Function (Jakub Otáhal)	52
Movement Control in a Hypokinetic Environment (Milan Hybner, Karel Jelen)	62
On Pulsatile Flow of Cerebrospinal Fluid (Zbyšek Štěpáník)	69
Foot Pressure Distribution (Barbora Pánková, Petr Kubový, Karel Jelen)	82
<b>Part 2: Structural Effects of Hypokinesia</b>	91
Hypokinesia in Patients with Ankylosing Spondylitis (Andrea Levitová, Pavel Frýbort)	92

The Influence of Hypo-hyper Kinetic Loading of the Human Musculoskeletal System on Bone Tissue Quality and Its Genetic Predispositions (Šárka Panská, Miroslav Petr, Karel Jelen)	105
The Effect of Mechanical Loading or Hypokinesia on the Structures of the Extracellular Matrix and Functional Changes in Soft Tissues (Daniel Hadraba)	131
Monotonous Physical Activity and Vibrations (Kateřina Kloučková, Petr Kubový, Karel Jelen)	143
The Effect of Hypokinesia on the Knee Cartilage (Lenka Horňáková, Karel Jelen)	159
The Effect of Hypokinesia in Cervicothoracal Region and Shoulder Girdle (Ivana Jelínková, Monika Šorfová)	173
The Influence of Hypokinesia on the Morphology and Function of the Foot (David Gerych, Karel Jelen)	192
<b>Conclusion</b>	204