

1. Record Nr.	UNINA9910484571403321
Titolo	Manual of Vibration Exercise and Vibration Therapy // edited by Jörn Rittweger
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2020
ISBN	3-030-43985-2
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (389 pages)
Disciplina	615.3219
Soggetti	Rehabilitation medicine Geriatrics Sports medicine Oncology Rehabilitation Medicine Geriatrics/Gerontology Sports Medicine Oncology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Preface -- THE FUNDAMENTALS -- Physics of Vibration -- The Biology of Vibration.-Design principles of Available machines.-Safety and contra-indications -- PHYSIOLOGICAL RESPONSES -- Biomechanics of Vibration Exercise -- Cutaneous and muscle mechanoreceptors, their sensitivity to mechanical vibrations.-Electromyographical recordings during Vibration -- Supraspinal Responses & Spinal Reflexes -- Assessing reflex latencies in responses to vibration: Evidence for the involvement of more than one receptor.-Metabolic responses to whole body vibration exercise -- Circulation Effects -- Hormonal responses to vibration therapy -- USE OF VIBRATION FOR TRAINING -- Warming up.-Modulation of Neuromuscular Function -- Application in Athletics -- Using whole body vibration for countermeasure exercise -- CLINICAL APPLICATIONS -- How to Design Exercise Sessions with Whole Body Vibration Platforms -- Whole Body Vibration in Geriatric Rehabilitation. -Application of vibration training for enhancing bone

strength.-Whole body vibration exercise as a treatment option for chronic lower back pain -- Pediatric Rehabilitation -- Chronic Obstructive Pulmonary Disease (COPD) -- Urinary Incontinence.- Primary Muscle Disorders.-Application of vibration training in people with common neurological disorders -- Whole body vibration therapy in patients with pulmonary hypertension and right heart failure: Lessons from a pilot study.-Vibration exercise and vibration therapy in metabolic syndrome.-Whole body vibration exercise in Cancer.- GLOSSARY, APPENDICES.

Sommario/riassunto

This book addresses various practical aspects of vibration exercise and vibration therapy. In addition, it describes the technical and physiological background, providing applied scientists and doctors with a deeper understanding of the therapeutic potential that vibration exercise holds. Having first emerged two decades ago, vibration exercise has since established itself as a widespread form of physical exercise, used in all rehabilitation areas. The goal of this book is to close the gap between scientific knowledge and practice. Given that occupational exposure to vibration leads to well-known unfavorable effects, a substantial section of the book is dedicated to potential risks, hazards and contra-indications. Moreover, the application of vibration therapy in a number of specific conditions is presented in a clinically usable fashion. Lastly, the use of vibration as a diagnostic tool will also be discussed. Given its breadth of coverage, this book will be of interest to physiotherapists and exercise scientists, but also to a wider range of physicians working in the field of rehabilitation.
