

Lower-Limb Prosthetics and Orthotics: Clinical Concepts

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Subjects: Lower-Limb Prostheses, Lower-Limb Orthoses, Gait Analyses: Normal, Pathological, and with Prosthesis, Functional Outcomes with Prosthetics and Orthotics.

DESCRIPTION: *Lower-Limb Prosthetics and Orthotics: Clinical Concepts* provides an extensive overview about lower-limb prosthetics and orthotics. It encompasses a wide range, including a summary of normal and pathologic gait, gait analysis with lower-limb prostheses, detailed exploration of the care of patients with lower-limb amputation, lower-limb biomechanics, clinical applications, as well as prosthetic and orthotic designs and components.

PURPOSE: The goal of the book, as stated in the preface, is to present the broad range of lower-limb prostheses and orthoses, ranging from relatively simple devices to sophisticated computerized models. The authors hope to inspire broader thinking about clinical management and a deeper understanding of rehabilitation so that patients may achieve the highest level of function and well being.

FEATURES: The book is composed of 26 chapters, is richly illustrated with over 150 line drawings and photographs, and has essential references at the end of each chapter. The following topics are addressed in the chapters: 1- "Normal Gait", 2- "Early Management", 3- "Transtibial Prostheses", 4- "Transtibial Biomechanics", 5- "Transtibial Static Evaluation", 6- "Transtibial Gait Analysis", 7- "Transfemoral Prostheses", 8- "Transfemoral Biomechanics", 9- "Transfemoral Static Evalua-

tion", 10- "Transfemoral Gait Analysis", 11- "Partial Foot Amputations and Prostheses", 12- "Knee and Hip Disarticulations and Prostheses", 13- "Bilateral Amputations and Prostheses", 14- "Prosthetic Gait and Activities Training", 15- "Lifelong Management of Older Patients", 16- "Prosthetic Functional Outcomes", 17- "Orthotic Principles", 18- "Shoes and Foot Orthoses", 19- "Ankle-Foot Orthoses", 20- "Knee-Ankle-Foot Orthoses", 21- "Hip-Knee-Ankle-Foot and Higher Orthoses", 22- "Orthotic Static Evaluation", 23- "Pathological Gait Analysis", 24- "Orthotic Functional Outcomes", 25- "Orthotics in Management of Musculoskeletal and Neuromuscular Disorders", 26- "Pediatric Prosthetics and Orthotics".

AUDIENCE: The book is written for clinicians in the fields of physical medicine and rehabilitation, orthopedics, vascular surgery, physical therapy, and occupational therapy.

ASSESSMENT: This is a useful reference tool in the literature written about lower-limb prosthetics and orthotics. It fully covers essential information across a range of transtibial and transfemoral prostheses, components, biomechanics, evaluation, and gait analysis. Furthermore, principles of orthotic design, including their purposes, means of increasing the wearer's comfort, advantages and drawbacks of a wide range of contemporary materials and other design considerations are established. The book concludes with a detailed discussion of orthotic management in patients having musculoskeletal and neuromuscular disorders, and with an extended presentation of both prostheses and orthoses in children. To my opinion, I feel that this book will successfully fulfill the scarce information in the literature about lower-limb prosthetics and orthotics.

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