

Book review:

The Identification and Treatment of Gait Problems in Cerebral Palsy
2nd Edition

Edited by James R. Gage, Michael H. Schwartz, Steven E. Koop and Tom F. Novacheck
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In his sequel to the outstanding previous editions on Gait in Cerebral Palsy, James Gage, has creatively improved and enhanced his treatment of this subject. This book is as fun to read as its interactive discs are to watch.

Page after page of this newest text on the subject of treatment of gait problems contain learning points on the detail needed to understand the complexities of altered gait set into motion by pathologies of central origin. In learning circles this is referred to as: high pearl content. This book is nicely organized into pertinent topics of interest to lifelong students in the care of cerebral palsy.

Members of the Academy for Cerebral Palsy and Developmental Medicine and practitioners involved in the care of children and adults with cerebral palsy will recognize the great authorities engaged to write chapters in this book. While most of the authors are based at Gillette Children's, this edition also features world renowned and orthopaedic additional bright lights whose clear writings we can't get enough of: like Scott Delp, Kerr Graham, Sylvia Ounpuu, Hank Chambers and Guy Molenaers.

The philosophy of treatment is unmistakably Gage saturated, all for the good. Dr. Gage has spent a career making the case for outcomes-based treatment of individuals with cerebral palsy. His team can be counted on to educate and thoughtfully evaluate children with movement disorders associated particularly with upper motor neuron problems. He and his team always present clear illustrations of important concepts. This book has these all in one place so they can be savored at leisure or plowed through to gain a mastery of subjects pertaining to the dynamics of cerebral palsy and gait. The therapist, the orthopedic surgeon, the bio-engineer, the developmental pediatrician can sink their teeth into this.

The book is divided into 2 sections: gait problems in cerebral palsy and treatment. Part I covers brain and musculoskeletal development and normal gait followed by details of pathologic development. The explanations are quite clear. Gage and Schwartz explain, for instance, with examples the differences in primary, secondary and tertiary effects of brain injury. Lever arm dysfunction, a concept so important in management of developmental paralytic problems, is elegantly explained. This book includes 2 discs that give graphic illustrations of these concepts. The disc starts with the book cover modeling severe, moderate crouch and normal gait - not just static pictures but skeletal models moving through the gait cycle with the muscle representations firing on and off like a dynamic Body Worlds exhibit. One entire disc is devoted to normal gait and the other covers pathologic gait examples and orthopedic surgical interventions. The first is the polished, voiced over, professionally edited Hollywood grade disc. The second disc is more interactive and is in a format that invites the viewers interpretation of the gait problem. Both serve to enhance the viewer's understanding of the problems. There are also surgical clips outlining some of the nuances of the recommended surgical techniques. The surgical technique portion is narrated by Dr. Novacheck.

Unlike many orthopedic texts, this is not however a surgical cook-book of cerebral palsy care. It forces the reader to carefully and systematically consider the multiple levels of pathology contributing to the overall gait pattern. It allows the in-depth background to problem solve the pathology. It delves into pharmacologic, neurosurgical, and therapeutic interventions as well as orthopedic solutions. Understanding the dynamic problems is critical to being able to solve them. This discusses in detail the fourth dimension, motion, that most orthopedic training neglects.

The way this book is divided allows the reader to read about a particular subject and get an in-depth grasp of the concepts. Each chapter starts off with the key points to be covered in the chapter and why they are clinically relevant. The problems of management are highlighted allowing thoughtful problem solving just like real life management of the patients we all take care of. The chapter on dynamic electromyography, for instance, defines and then builds on muscle motor-unit structure, function and then common EMG patterns seen in problems like a stiff knee gait, knee recurvatum and the varus foot. Although the clinical pattern can be similar, electromyographic differences help differentiate the causes of the problem and therefore provide guidance toward informed management decisions.

For members of the American Academy for Cerebral Palsy and Developmental Medicine and anyone who cares for children or adults with cerebral palsy, this is a must have book to master the most important concepts of management. It contains an accumulation of scientific strides over the past 40 years in this field. Full grasp of all the material in this book would jump start any young professional's knowledge base and enhance that of the seasoned clinician. It is a necessary classic treatise.

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