

Kaltenborn F. *Manual Mobilization of the Joints, Vol 3: Traction-Manipulation of the Extremities and Spine (Basic Thrust Techniques)*. Norli, Oslo, Norway; OPTP, Minneapolis, MN. 2008, 107 pp., illus.

This book, by world-renowned physical therapist Freddy Kaltenborn, is intended to introduce joint manipulation to entry-level physical therapists using safe and effective methods. Kaltenborn repeatedly stresses that this text is not meant to replace feedback from skilled practitioners, lengthy education, and practice. The text often refers to previous volumes for more a detailed explanation of key concepts and terms. The other volumes are *Manual Mobilization of the Joints, Volume I: The Extremities*, and *Manual Mobilization of the Joints, Volume II: The Spine*.

There are 5 chapters in this volume. In the introductory chapter, Kaltenborn stresses that rotary manipulations are not taught in his manual therapy philosophy because of the risk of traumatizing the vertebral arteries in the cervical spine, and the intervertebral disc in the lumbar spine. Manipulation is defined and described. The author states that joint manipulation is the most effective treatment available for intraarticular restrictions. In this section, the significance of the audible "pop" is discussed. The evaluation process is also described here. Clinical goals emphasized are: establishing a physical diagnosis, contraindications and indications to treatment, and establishing a baseline to measure progress.

Manipulation technique is the title of the second chapter. Joint mobilizations and manipulations are compared and contrasted. The principles of thrust techniques are described. The confirmation that a joint's end-feel is appropriate for manipulation is the first step. The second step is placing the targeted joint in its actual resting position. The next step is establishing the line of drive for the thrust, and then the thrust is applied. The factors that make up a traction-manipulation thrust are presented. The proper quality, amplitude, grade, timing, and force are discussed.

The third through fifth chapters make up the bulk of the book. Chapter 3 focuses on the techniques for the extremities, chapter 4 the spine and chapter 5 the jaw. Finding the actual resting position in the extremities and the spine, is described in detail. For each spe-

cific area of the body, the normal resting position, the actual resting position and the line of drive for traction-manipulation are described. In these sections there are depictions of the line of force as well as black and white photos of each technique. Pictures are clear and augment the written descriptions. Additional notes are provided for some of the techniques due either to the unique characteristics of the joint involved or the technique itself.

The appendix is filled with interesting information. The history of traction is traced back to 300-400 BC. Traction techniques used by Hippocrates for the spine and extremities are illustrated. The history of the Swedish Gymnastik Directors is discussed. This led to Medical Gymnasts who eventually became known as Physical Therapists. The evolution of Nordic manual therapy was presented. Various practitioners provided input to the Nordic system including, James Men- nell, MD; James Cyriax, MD; Alan Stod- dard, MD, DO. Kaltenborn's training and influence on the field of Manual Therapy are depicted. The founding of the International Federation of Manual Therapy is presented. Comments about avoiding rotary manipulation and further research that is needed, along with guidelines, are offered.

Kaltenborn has written this book for the entry-level physical therapist, however, his wisdom and clinical pearls are valuable to any orthopaedic clinician. While the reader might be tempted to go immediately to the technique sections of this text, they would be remiss not to study first the introduction at great length. Kaltenborn's writing style is succinct and to the point. While this text could have included more research, such as the incorporation of clinical prediction rules, this text belongs on the desk of the manual therapist to compliment those on *Manual Mobilization of the Spine and Extremities*.

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