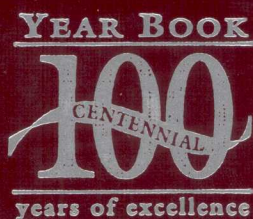


YEAR BOOK®

YEAR BOOK OF CHIROPRACTIC® 2001



DANA J. LAWRENCE

2001

The Year Book of CHIROPRACTIC®

Editor-in-Chief

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Statement of Purpose

The YEAR BOOK Series

The YEAR BOOK series was devised in 1901 by health professionals who observed that the literature of medicine and related disciplines had become so voluminous that no one individual could read and place in perspective every potential advance in a major specialty. That has never been more true than it is today.

More than merely a series of books, YEAR BOOK volumes are the tangible results of a unique service designed to accomplish the following:

- to *survey* a wide range of journals
- to *select* from those journals papers representing significant advances and statements of important clinical principles
- to provide *abstracts* of those articles that are readable, convenient summaries of their key points
- to provide *informed commentary* about their relevance

These publications grow out of a unique process that draws on the talents of outstanding authorities in clinical and fundamental disciplines, trained literature specialists, and professional writers—all supported by the resources of Mosby, the world's preeminent publisher for the health professions.

The Literature Base

Mosby and its editors survey approximately 500 journals published worldwide, covering the full range of the health professions. On an annual basis, the publisher examines usage patterns and polls its expert authorities to add new journals to the literature base and to delete journals that are no longer useful as potential YEAR BOOK sources.

The Literature Survey

More than 250,000 peer-reviewed articles per year are scanned systematically—including title, text, illustrations, tables, and references—by the publisher's team of literature specialists. Each scan is compared, article by article, to the search strategies that the publisher has developed in consultation with the nearly 200 outside experts who form the pool of YEAR BOOK editors. A given article with broad scientific or clinical implications may be reviewed by any number of YEAR BOOK editors, from one to a dozen or more, regardless of the discipline for which the paper was originally published. In turn, each editor who receives the article reviews it to determine whether it should be included in his or her volume. This decision is based on the article's inherent quality, its relevance to readers of that YEAR BOOK, and the editor's goal to represent a comprehensive picture of a given field in each volume of the YEAR BOOK. In addition, the editor indicates when to include figures and tables from the article to help the YEAR BOOK reader better understand the information.

Of the quarter million articles scanned each year, only 5% are selected for publication within the YEAR BOOK series, thereby assuring readers of the high value of every selection.

The Abstract

The publisher's abstracting staff is headed by a seasoned medical editing professional and includes individuals with extensive experience in writing for the health professions. When an article is selected for inclusion in a YEAR BOOK, it is assigned to a member of the abstracting staff. The abstractor, guided in many cases by notations supplied by the physician editor, writes a structured, condensed summary designed to rapidly communicate to the reader the essential information contained in the article.

The Commentary

The YEAR BOOK editorial boards, sometimes assisted by guest contributors, write comments that place each article in perspective. This provides the reader with insights from authorities in each discipline that point out the value of the article and that often reflect the authority's thought processes in assessing the article.

Additional Editorial Features

The editorial boards of each YEAR BOOK organize the abstracts and comments to provide a logical and satisfying sequence of information. To enhance the organization, editors also provide introductions to sections or individual chapters, comments linking a number of abstracts, citations to additional literature, and other features.

The published YEAR BOOK contains enhanced bibliographic citations for each selected article, including extended listings of multiple authors and identification of author affiliations. Each YEAR BOOK contains a Table of Contents specific to that year's volume. From year to year, the Table of Contents for a given YEAR BOOK may vary, depending on developments within the field.

Every YEAR BOOK contains a list of the journals from which articles have been selected. This list represents a subset of approximately 500 journals surveyed by the publisher and occasionally reflects a particularly pertinent article from a journal that is not surveyed routinely.

Finally, each volume contains a comprehensive subject index and an index to authors of each selected article.

The 2001 Year Book Series

Year Book of Allergy, Asthma, and Clinical Immunology™: Drs Rosenwasser, Boguniewicz, Milgrom, Routes, and Spahn

Year Book of Anesthesiology and Pain Management™: Drs Tinker, Abram, Chestnut, Roizen, Rothenberg, and Wood

Year Book of Cardiology®: Drs Schlant, Collins, Gersh, Graham, Kaplan, and Waldo

Year Book of Chiropractic®: Dr Lawrence

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Year Book of Endocrinology®: Drs Mazzaferri, Fitzpatrick, Horton, Kannan, Kreisberg, Meikle, Molitch, Morley, Osei, Poehlman, and Rogol

Year Book of Family Practice®: Drs Bowman, Dexter, Gilchrist, Morrison, Neill, and Scherger

Year Book of Gastroenterology™: Drs Lichtenstein, Dempsey, Ginsberg, Katzka, Kochman, Morris, Nunes, Rosato, and Stein

Year Book of Hand Surgery®: Drs Berger and Ladd

Year Book of Medicine®: Drs Barkin, Frishman, Jett, Klahr, Loehrer, Malawista, Mandell, and Mazzaferri

Year Book of Neonatal and Perinatal Medicine®: Drs Fanaroff, Maisels, and Stevenson

Year Book of Neurology and Neurosurgery®: Drs Gibbs and Verma

Year Book of Nuclear Medicine®: Drs Gottschalk, Blaurox, Coleman, Strauss, and Zubal

Year Book of Obstetrics, Gynecology, and Women's Health®: Drs Mishell, Kirschbaum, and Miller

Year Book of Oncology®: Drs Loehrer, Eisenberg, Glatstein, Gordon, Johnson, Pratt, and Thigpen

Year Book of Ophthalmology®: Drs Wilson, Cohen, Eagle, Grossman, Laibson, Maguire, Nelson, Penne, Rapuano, Sergott, Shields, Spaeth, Steinmann, Tipperman, Ms Gosfield, and Ms Salmon

Year Book of Orthopedics®: Drs Morrey, Beauchamp, Currier, Peterson, Swiontkowski, and Trigg

Year Book of Otolaryngology–Head and Neck Surgery®: Drs Paparella, Holt, and Otto

Year Book of Pathology and Laboratory Medicine®: Drs Raab, Bissell, Dabbs, Silverman, and Stanley

Year Book of Pediatrics®: Dr Stockman

Year Book of Plastic, Reconstructive, and Aesthetic Surgery®: Drs Miller, Bartlett, Garner, McKinney, Ruberg, Salisbury, and Smith

Year Book of Psychiatry and Applied Mental Health®: Drs Talbott, Ballenger, Eells, Frances, Jensen, Meltzer, Simpson, and Tasman

Year Book of Pulmonary Disease®: Drs Jett, Castro, Maurer, Peters, Phillips, and Ryu

Year Book of Rheumatology, Arthritis, and Musculoskeletal Disease™: Drs Panush, Hadler, Hellmann, Lahita, Lane, and LeRoy

Year Book of Sports Medicine®: Drs Shephard, Alexander, Kohrt, Nieman, Torg, and Mr George

Year Book of Surgery®: Drs Copeland, Bland, Cerfolio, Deitch, Eberlein, Howard, Luce, Seeger, and Souba

Year Book of Urology®: Drs Andriole and Coplen

Year Book of Vascular Surgery®: Dr Porter

Journals Represented

Mosby and its editors survey approximately 500 journals for its abstract and commentary publications. From these journals, the editors select the articles to be abstracted. Journals represented in this YEAR BOOK are listed below.

Acta Obstetricia et Gynecologica Scandinavica
Acta Orthopaedica Scandinavica
Acta Paediatrica
American Family Physician
American Journal of Epidemiology
American Journal of Physical Medicine & Rehabilitation
American Journal of Public Health
American Journal of Roentgenology
American Journal of Sports Medicine
Anesthesia and Analgesia
Anesthesiology
Annals of Rheumatic Diseases
Archives of Family Medicine
Archives of Otolaryngology-Head and Neck Surgery
Archives of Physical Medicine and Rehabilitation
Arthritis and Rheumatism
Arthroscopy
Australian and New Zealand Journal of Obstetrics and Gynaecology
British Journal of General Practice
British Medical Journal
Cephalgia
Chiropractic Journal of Australia
Clinical Biomechanics
Clinical Journal of Pain
Clinical Orthopaedics and Related Research
Clinical Radiology
Comprehensive Psychiatry
Foot & Ankle International
Headache
International Journal of Sports Medicine
Journal of Athletic Training
Journal of Bone and Joint Surgery (American Volume)
Journal of Bone and Joint Surgery (British Volume)
Journal of Clinical Epidemiology
Journal of Emergency Medicine
Journal of Family Practice
Journal of Gerontology C
Journal of Hand Surgery (British)
Journal of Hand Therapy
Journal of Manipulative and Physiological Therapeutics
Journal of Neurosurgery: Spine
Journal of Orthopaedic Research
Journal of Orthopaedic and Sports Physical Therapy
Journal of Pediatric Orthopaedics
Journal of Pediatrics
Journal of Rheumatology

Journal of Spinal Disorders
Journal of the American Board of Family Practice
Journal of the American College of Surgeons
Journal of the American Medical Association
Journal of the Canadian Chiropractic Association
Journal of the Neurological Sciences
Lancet
Mayo Clinic Proceedings
Medicine and Science in Sports and Exercise
Nephrology, Dialysis, Transplantation
Neurology
Neuroradiology
Occupational and Environmental Medicine
Pain
Pediatric Radiology
Physical Therapy
Radiology
Regional Anesthesia and Pain Medicine
Scandinavian Journal of Rehabilitation Medicine
Science
Southern Medical Journal
Spine
Sports Medicine
Western Journal of Medicine

STANDARD ABBREVIATIONS

The following terms are abbreviated in this edition: acquired immunodeficiency syndrome (AIDS), cardiopulmonary resuscitation (CPR), central nervous system (CNS), cerebrospinal fluid (CSF), computed tomography (CT), deoxyribonucleic acid (DNA), electrocardiography (ECG), health maintenance organization (HMO), human immunodeficiency virus (HIV), intensive care unit (ICU), intramuscular (IM), intravenous (IV), magnetic resonance (MR) imaging (MRI), ribonucleic acid (RNA), ultrasound (US), and ultraviolet (UV).

NOTE

The YEAR BOOK OF CHIROPRACTIC® is a literature survey service providing abstracts of articles published in the professional literature. Every effort is made to assure the accuracy of the information presented in these pages. Neither the editor nor the publisher of the YEAR BOOK OF CHIROPRACTIC® can be responsible for errors in the original materials. The editors' comments are their own opinions. Mention of specific products within this publication does not constitute endorsement.

To facilitate the use of YEAR BOOK OF CHIROPRACTIC® as a reference tool, all illustrations and tables included in this publication are now identified as they appear in the original article. This change is meant to help the reader recognize that any illustration or table appearing in YEAR BOOK OF CHIROPRACTIC® may be only one of many in the original article. For this reason, figure and table numbers will often appear to be out of sequence within YEAR BOOK OF CHIROPRACTIC®.

Publisher's Preface

The publication of the 2001 YEAR BOOK series marks the 100th anniversary of the original Practical Medicine Series of Year Books. To commemorate this milestone, each 2001 Year Book includes an anniversary seal on the cover. The format of the Year Books remains unchanged from the beginning of the last century—each volume consists of abstracts of the best scholarly articles of the year, accompanied by expert critical commentaries.

The first Year Book appeared in 1900 when Gustavus P. Head, MD, produced the first *Year Book of the Nose, Throat and Ear*, a volume consisting of highlights from the previous year's best literature, enhanced by expert observations. Dr Head assembled a small group of distinguished physicians to serve as editors, and the first series of Year Books was published in 1901. The first volumes of the Year Book series—*General Medicine, General Surgery, The Eye, Gynecology, Obstetrics, Materia Medica and Therapeutics, Pediatrics, Physiology, and Skin and Venereal Diseases*—appeared at monthly intervals, with 10 volumes published in 1 year. The entire series was met with critical enthusiasm.

In 1904, Dr Head's brother, Cloyd, assumed responsibility for the management of the Year Books. In 1905, the volumes began to appear at regular intervals during the calendar year instead of on a monthly basis. By World War I, the Year Books had been established as an authority on medical and surgical progress.

The postwar period brought about a significant change in the practice of medicine: specialization. To accommodate the rise of specialization in medicine, the Year Books were now sold as individual volumes rather than only as a complete set. This change brought about a tremendous response and sales of the books increased. In 1922, the Year Books became even more specialized, as the books now had different editors for the different medical specialties covered in each volume. Later, in 1933, the title of the series changed from the Practical Medicine Series of Year Books to the Practical Medicine Year Books to reflect these new designs.

The Year Books have grown significantly from the first 10-volume series in 1901 to a diversified series of 32 volumes in 2001. That the Year Book series is the only one of its kind to have survived is a testament to the vision and commitment of its founders. Some minor changes in format and design have occurred throughout the years, but the mission of the Year Book series—to provide a record of exceptional medical achievements distinguished by the reflections of many of the great names in medicine today—has remained constant.

Introduction

Although this is listed as the 2001 YEAR BOOK OF CHIROPRACTIC, it is actually the first YEAR BOOK of the new millennium. In thinking about appropriate topics for the introduction to this latest edition of the YEAR BOOK, I considered what has had the greatest impact on the ability of the chiropractic profession to receive notice from both the scientific community and the public. I think the most exciting development in information technology of the past 15 years, and one that may ultimately prove to be as influential as the development of movable type, is that of the role of the Internet.

Only 15 years ago, I purchased my first computer—an Apple 2E. I could not imagine how much easier it would make my life as an editor. I could finally save text, make changes, and edit with complete ease. And when I bought my first Apple SE, with its 1 meg of RAM and 20 megabytes of hard drive, I was in heaven. I could not have imagined the iMac I have today, with its 6 gigabyte drive, 132 megs of RAM, 56K modem, and access to the web. Developments such as these have created unlimited access to information at a level that would have been inconceivable only a decade ago. I regularly use the Web to access information, as do millions of other people. Indeed, today the challenge is weeding out the useless from the useful. A visit to yahoo.com with the key word “chiropractic” will turn up over one million references. How can one know what is good in all that information? I thought I would list here those sites I have found to be useful when I search for chiropractic information.

In no particular order, they are:

- United States National Library of Medicine: www.nlm.nih.gov
- Pubmed: www.ncbi.nlm.nih.gov/PubMed
- MANTIS: www.healthindex.com
- Cinahl Information Systems: www.cinahl.com
- Cochrane Collaboration: www.cochrane.org
- Spine Online: www.spinejournal.com
- American Back Society: www.americanbacksoc.org
- American Chiropractic Association: www.amerchiro.org
- Canadian Chiropractic Association: www.ccachiro.org
- Congress of Chiropractic State Associations: www.cocsa.org
- Ethics on the Web: commfaculty.fullerton.edu/lester/ethics/ethics_list.html
- National Reference Center for Bioethics Literature: guweb.georgetown.edu/nrcbl/
- American Society of Law, Medicine and Ethics: www.aslme.org
- Center for the Study of Bioethics: www.mcw.edu/bioethics

- National Institutes of Health: www.nih.gov
- National Center for Complementary and Alternative Medicine:
nccam.nih.gov

And my personal favorite web site, which has nothing to do with science:

- DyeStat: High School Track and Field and Cross Country:
dyestat.rivals.com

Dana J. Lawrence, DC
Editor-in-Chief

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1 Clinical Management

Manual Procedures: Manipulation

Electromyographic Responses of Back and Limb Muscles Associated With Spinal Manipulative Therapy

Herzog W, Scheele D, Conway PJ (Univ of Calgary, Alta)

Spine 24:146-153, 1999

1-1

Background.—Spinal manipulation has been associated with reflexogenic pain relief and a loss of hypertonicity of muscles in the treatment area. The magnitude and extent of reflex responses resulting from spinal manipulation were investigated.

Methods.—Ten young, asymptomatic men underwent 11 spinal manipulative treatments on the cervical, thoracic, and lumbar levels and the sacroiliac joint. Reflex activities were measured by 16 pairs of bipolar surface electrodes on the back and proximal limb musculature.

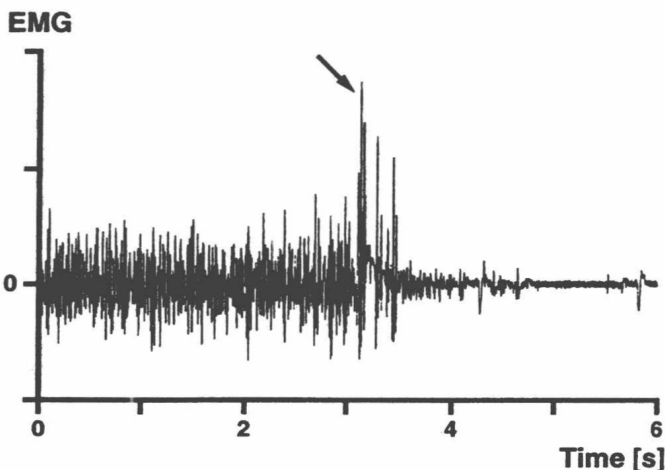


FIGURE 8.—Electromyographic response in a patient with hypertonic thoracic musculature. The hypertonicity manifested itself in intense electromyographic activity before the treatment thrust. During the spinal manipulative therapy in the thoracic spine, an electromyographic response was superimposed on the hypertonic activity (arrow). After the thrust, the electromyograph (EMG) was virtually silent, and the hypertonicity had largely resolved. (Courtesy of Herzog W, Scheele D, Conway PJ: Electromyographic responses of back and limb muscles associated with spinal manipulative therapy. *Spine* 24:146-153, 1999.)

Findings.—Each treatment resulted in consistent reflex responses in the target-specific area. Reflex responses occurred 50 to 200 ms after treatment thrust began and lasted for 100 to 400 ms (Fig 8). The responses, which were probably of multireceptor origin, were elicited asynchronously.

Conclusion.—This is the first study to show a consistent reflex response from spinal manipulation. Reflex pathways were elicited systematically during spinal manipulation; thus, these responses may cause some of the benefits seen clinically, such as decreased pain and hypertonicity of muscles.

► Although many of the basic science studies of manipulation today deal more with biomechanics, this study is notable in that it addresses issues involved in reflex generation after manipulation. It also provides a novel method for studying muscle responses to chiropractic manipulation. One finding from this study bears further work: the idea that unilevel responses may not be the norm when manipulation occurs and that a more general response occurs. However, the information gathered here is short term post manipulation. For example, there is no way from this study to see whether there would have been a reduction in pain (though, of course, this was not the design of the research). Nor can we say what the long-term implications might be. However, this is an important piece of research and one that has application to future study.

D. J. Lawrence, DC

Treatment of Shoulder Complaints in General Practice: Long Term Results of a Randomised, Single Blind Study Comparing Physiotherapy, Manipulation, and Corticosteroid Injection

Winters JC, Jorritsma W, Groenier KH, et al (Univ of Groningen, The Netherlands; Rehabilitation Centre Beatrixoord, Haren, The Netherlands)
BMJ 318:1395-1396, 1999

1-2

Background.—Shoulder complaints often become recurrent or persistent, yet few studies have examined the long-term outcomes of treatment. A previous 11-week trial showed corticosteroid injection therapy superior to physiotherapy and manipulative therapy for patients with complaints arising from the glenohumeral joint, subacromial space, or acromioclavicular joint (synovial group). In contrast, manipulation was superior to physiotherapy for patients with functional disorders of the cervical spine or adjoining ribs (shoulder girdle group). The long-term results of these treatments were assessed.

Methods.—A questionnaire was sent to 172 participants 2 to 3 years after completion of the trial. The patients were asked about any persistent, recurrent, or new shoulder complaints since the end of the study. The patients were also asked about subsequent diagnostic and treatment procedures, and whether they felt “cured.”

TABLE.—Characteristics of 130 Patients Who Took Part in 1994-1995 Trial Who Were Followed Up in 1997

Complaints and Treatment	Shoulder Girdle Group (n=18)		Synovial Group (n=26)	
	Manipulation (n=18)	Physiotherapy (n=22)	Injection Therapy (n=38)	Physiotherapy (n=26)
Complaint at some time since earlier trial	12	17	18	11
Current complaints	6	13	9	6
Previous complaints and current complaints	5	13	9	5
Not feeling cured	4	8	9	5
Consulted general practitioner	6	12	9	6
Referred to specialist	0	2	5	6
Supplementary examination	0	2	3	3
Treatment after finishing trial:	6	11	10	8
Physiotherapy	3	5	5	3
Injection therapy	0	3	5	5
Manipulation	2	2	1	1
Other	2	2	2	3
Limitations in activities in daily living	9	11	20	13
Self treatment	8	14	19	13

Note: No significant differences were found between the treatment groups of the 2 diagnostic groups with χ^2 testing. The separate categories of the treatment after finishing the trial could not be tested because of the small numbers in each category.

(Courtesy of Winters JG, Jorritsma W, Groenier KH, et al: Treatment of shoulder complaints in general practice: Long term results of a randomised, single blind study comparing physiotherapy, manipulation, and corticosteroid injection. *BMJ* 318:1395-1396, 1999. Published with permission from the BMJ Publishing Group.)