

# YEAR BOOK®

## YEAR BOOK OF DENTISTRY® 2001

YEAR BOOK  
**100**  
CENTENNIAL  
years of excellence

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2001

# The Year Book of DENTISTRY®

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**2001 EDITION**

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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.

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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.

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## 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

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**Year Book of Chiropractic®:** Dr Lawrence

**Year Book of Critical Care Medicine®:** Drs Parrillo, Dellinger, Balk, Calvin, Franklin, and Shapiro

**Year Book of Dentistry®:** Drs Zakariasen, Boghosian, Dederich, Hatcher, Horswell, and McIntyre

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

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**Year Book of Neurology and Neurosurgery®:** Drs Bradley, Gibbs, and Verma

**Year Book of Nuclear Medicine®:** Drs Gottschalk, Blaufox, 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

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## 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.

Academic Emergency Medicine  
Age and Ageing  
American Journal of Dentistry  
American Journal of Orthodontics and Dentofacial Orthopedics  
British Dental Journal  
British Journal of Plastic Surgery  
California Dental Association Journal  
Caries Research  
Chest  
Compendium of Continuing Education in Dentistry (Compendium)  
Contemporary Pediatrics  
Contemporary Surgery  
Cutis  
Dental Materials  
Endodontics and Dental Traumatology  
General Dentistry  
Implant Dentistry  
International Endodontic Journal  
International Journal of Oral and Maxillofacial Implants  
International Journal of Prosthodontics  
Journal of Clinical Pediatric Dentistry  
Journal of Clinical Periodontology  
Journal of Dental Education  
Journal of Dental Research  
Journal of Dentistry  
Journal of Endodontics  
Journal of Oral and Maxillofacial Surgery  
Journal of Orofacial Pain  
Journal of Periodontology  
Journal of Prosthetic Dentistry  
Journal of Public Health Dentistry  
Journal of the American Dental Association  
Journal of the American Medical Association  
Journal of the Canadian Dental Association (CDA)  
Journal of the Massachusetts Dental Society  
Lasers in Surgery and Medicine  
Oklahoma Dental Association Journal  
Operative Dentistry  
Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology, and Endodontics  
Pediatric Dentistry  
Quintessence International  
Scandinavian Journal of Plastic and Reconstructive Hand Surgery  
Skeletal Radiology

#### 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), temporomandibular joint (TMJ), and ultrasound (US).

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#### NOTE

The YEAR BOOK OF DENTISTRY® 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 editors nor the publisher of the YEAR BOOK OF DENTISTRY® 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 the YEAR BOOK OF DENTISTRY® 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 the YEAR BOOK OF DENTISTRY® 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 the YEAR BOOK OF DENTISTRY®.

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## 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 content and format of the Year Books remain 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 series of their 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.

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## Introduction

It is hard to believe that another year has already gone by—that is, until I realized that we had selected 261 articles for inclusion in the 2001 YEAR BOOK OF DENTISTRY. This means that an incredible volume of dental literature was reviewed by our editors from this past year's journals to narrow the focus down to the 261 articles that our editors felt would bring valuable information to practicing clinical dentists. While our review of the dental literature is a large undertaking, it is a great learning experience for those of us involved. We literally have the opportunity to see all of the important literature in each of our specific disciplines, and we have the privilege of picking out those articles for the YEAR BOOK that we believe will provide a broad, but thorough, overview of what has occurred in dentistry during this past year.

We have had several changes in the editorial staffing for the 2001 YEAR BOOK. Drs John Burgess, Gerald Harrington, and Amid Ismail have joined our editorial group this year. They are distinguished faculty at the Louisiana State University, the University of Washington, and the University of Michigan, and they are outstanding individuals in the fields of restorative dentistry, endodontics, and dental epidemiology. I am delighted they have joined our group of editors as guest editors this year. I also thank Dr Bob Fiegal and Dr Cal Torneck for their excellent contributions to the 2000 YEAR BOOK OF DENTISTRY. They are superb leaders in the areas of pediatric dentistry and endodontics, and the expertise and insights that they provided in the last YEAR BOOK are greatly appreciated.

As I reviewed the topics covered by the articles selected this year, I reflected upon the emphasis placed today on being a knowledge-based society and what this means for dental practice. The dental literature provides new knowledge to practitioners. Sometimes this is completely new knowledge, and sometimes it is additional knowledge that further refines something we are already doing. For example, when lasers were introduced in periodontics for surgical procedures, it was a totally new technique for accomplishing soft tissue surgery. However, continued research in this area has provided additional knowledge, which has allowed us to refine laser surgical techniques. Likewise, etching of tooth structure and bonding was at one time a totally new technology, while current research has allowed us to continually perfect techniques to be more effective.

Whether knowledge is totally new or refines existing science, it often allows us to continue to improve the treatments we are able to render to patients. What new knowledge really does is encourage positive change to occur. Those individuals who don't like change are probably very uncomfortable today because knowledge is expanding so rapidly. Those individuals who like change are probably ecstatic about living in a time of a knowledge "explosion"—it gives them the opportunity to rapidly move their practices forward with ever-improving treatment modalities for their

patients. With this mindset, it would be very difficult to ever get bored with dental practice.

As you read the abstracts and editors' comments in the 2001 YEAR BOOK, you will find many discussions regarding new knowledge that will potentially change the way dentistry is practiced now and in the future. Thus, some of the articles you read will have immediate application, while others will help to provide a "window to view the future" of our profession. I hope you enjoy the 2001 YEAR BOOK!

**Kenneth L. Zakariasen, DDS, PhD**

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