

International Symposium on



Baseball



Softball



STP 1313

Earl F. Hoerner  
Francis A. Cosgrove  
editors

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# *International Symposium on Safety in Baseball/Softball*

*Earl F. Hoerner and Francis A. Cosgrove, editors*

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# Foreword

This publication, *International Symposium on Safety in Baseball/Softball*, contains papers presented at the symposium of the same name held in Atlanta, Georgia, on December 6, 1995. The symposium was sponsored by ASTM Committee F08 on Sports Equipment and Facilities and Subcommittee F08.26 on Baseball and Softball Equipment. The symposium chairmen were Earl F. Hoerner and Francis A. Cosgrove.

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# Overview

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Baseball and softball, two of America's most popular pastimes, are undergoing very significant, if not radical, changes. The rapidly growing numbers of players of all ages, with a wide range of skill levels; the new generation of hi-tech bats and balls; the obsolescence of older playing fields; the growing sophistication of coaching, training, and conditioning of players; the importance of routine ball field maintenance; and the appropriate management of baseball and softball programs are having a significant impact on player and spectator safety at all levels of baseball and softball play.

Because of the growing concern for baseball/softball safety issues, ASTM, in conjunction with its F8 Committee on Sports Equipment and Facilities, sponsored for the first time the International Symposium on Safety in Baseball and Softball. The symposium's mission: to review the state of the art and science of new products, materials, technology, epidemiology, and program operations that are baseball/softball specific.

The call for papers precipitated a significant response, resulting in a truly inter-disciplinary symposium that produced a collection of papers that will add valuable information to the growing body of baseball/softball safety-specific literature. The papers published herein present state of the art and science on such subjects as: the physics of baseball/softball equipment (bats, balls, bases, etc.); advances in protective equipment; baseball/softball field design; operations and maintenance; and the epidemiology of baseball/softball injuries.

The information presented in this volume will provide interested baseball/softball parties with new recommendations, guidelines, and suggestions on how baseball and softball programs, equipment, and facilities can be made safer. Whether you are concerned with the scientific intricacies of bat and ball research or how to best manage baseball/softball programs, this publication will offer the reader a unique opportunity to find, under one cover, the most current and diverse collection of baseball/softball safety-related data and information available.

Many of the findings expressed by the authors will have important ramifications for the improvement of the safety of baseball and softball. For example, current research on the liveliness qualities of bats and balls will result in *liveliness value guidelines* that will enable manufacturers to produce bats and balls designed for the dimension(s) limitations of playing fields and the skill levels of baseball and softball players. Other baseball/softball specific research is producing a new generation of protective equipment designed to protect the face and chest of players other than the catcher. These new products, and a host of others, will make significant contributions toward reducing serious injury and incidents of death to baseball/softball players.

While the papers presented in this publication are "leading edge," there is still much to do to improve safety in baseball and softball. Significant work still remains on safety research on bases and their relationship to player sliding skills, and baseball/softball infield maintenance. The collection, reporting, and on-going analysis of baseball/softball injury data requires serious attention in order to develop reporting systems that more accurately identify the specific nature, severity, and causes of baseball/softball injuries. National demographic changes and their impact on baseball and softball now and into the next century must be monitored and accurately assessed if baseball/softball associations, program planners, facility operators, and equipment manufacturers are to respond effectively to the changing

baseball/softball player marketplace. The aging baby boom generation and the dramatic growth of female softball players of all ages are two obvious (demographic) segments of our society that are significantly impacting the games of baseball and softball, and they will continue to do so well into the next century.

The information presented in the following papers represents the findings, opinions, and recommendations of physicians, educators, scientists, equipment manufacturers, architects, lawyers, program operators, inventors, advocates, and baseball/softball players. They came together in a highly focused forum dedicated exclusively to the safety issues related to baseball and softball, and, as a result, ASTM is proud to present this unique compendium of papers, arranged in random order, that will add exclusive, valuable information to the growing body of research literature dedicated to the improvement of safety in baseball and softball.

*THE EDITORS*

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