



# ATHLETIC TRAINING

THE JOURNAL OF THE NATIONAL ATHLETIC TRAINERS ASSOCIATION



**IN THIS ISSUE:**

**The Winner of the First Annual N.A.T.A. Student Writing Contest**

**Schering Symposium: Functional Anatomy and Biomechanics  
of the Wrist and Elbow Joints**

**Can Your Athletes Really See?**

**Ankle Taping: Prevention of Injury or Waste of Time?**

**Proceedings of the National Athletic Trainers Association**

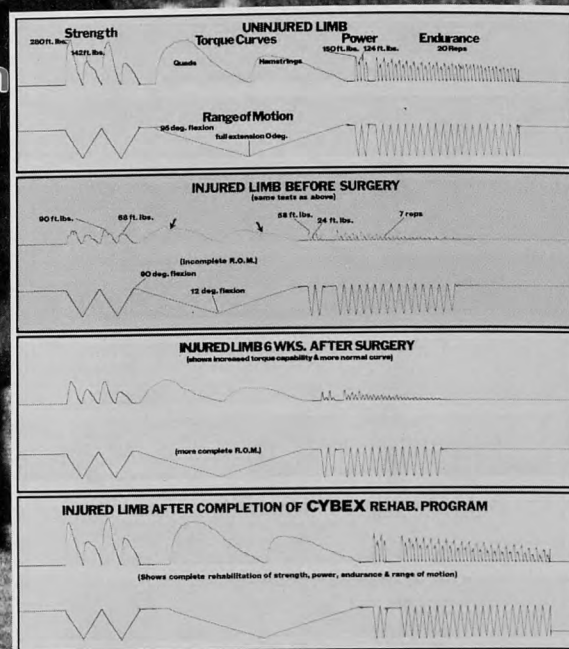
**VOLUME 14  
NUMBER 3  
FALL 1979**



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# ATHLETIC TRAINING

THE JOURNAL OF  
THE NATIONAL ATHLETIC TRAINERS ASSOCIATION

VOLUME 14

NUMBER 3

FALL 1979

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## FROM THE PRESIDENT



Dear N.A.T.A. Member:

It was good to see so many people at our Annual Meeting and Clinical Symposium in St. Louis. The clinical sessions were excellent and well attended. Our national business meeting had exceptionally large numbers of people in attendance which indicated to me that our members are interested in the way our association is functioning. Congratulations to District 9 for putting on one of our best and biggest annual meetings.

The moratorium on licensure was lifted in St. Louis. I want to re-emphasize the importance of working with the state chapters of the APTA. It would be to each states advantage to initiate dialogue prior to formally introducing any legislation. There are still areas of concern which perhaps can be best handled at the state level.

Also, before formally introducing any licensure bills it is advisable to send the bill to Bob Behnke at Indiana State University for review. Bob will review the bill and might be able to make some suggestions that could help in getting the bill passed.

If any of you are planning to begin pushing for licensure, a copy of our model legislation and comments from the APTA are available from your District Director.

Our Association was fortunate to be given \$5,000 for our scholarship fund by the NFL Charities. NFL Charities has pledged \$5,000 for the next four years which at the end of that period the total given to N.A.T.A. will be \$30,000. We are indeed thankful to Commissioner Pete Rozelle and NFL Charities for their generosity and help.

The upcoming year is going to be busy as we continue our many liaison activities. Our membership continues to grow at a healthy pace.

Because of our increasing activities and growth, it is important that each member contribute in some way. Feel free to correspond with myself or your District Director if you have any suggestions, ideas, or concerns in regard to N.A.T.A.

Best wishes,

William H. Chambers  
President

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## CALENDAR OF EVENTS

Athletic Training will be happy to list events of interest to persons involved in sports medicine, providing we receive the information at least two months in advance of publication. Please include all pertinent information and the name and address of the person to contact for further information. This information should be sent to Jeff Fair, Athletic Department, Oklahoma State University, Stillwater, OK 74074.

### SEPTEMBER, 1979

**28-30** La Crosse Cardiac Rehabilitation Seminar, Arlington Hyatt, Washington, D.C. Contact Philip Wilson, Executive Director, La Crosse Exercise Program, University of Wisconsin-La Crosse, La Crosse, Wisconsin 54601.

### OCTOBER, 1979

**5-7** NAPSE Mid-America Secondary School Physical Education Conference, Chicago. Contact Pat Vanderberg, Lyons TWP High School, 100 S. Brainard, La Grange, IL 60204.

**8-12 & 15-19** La Crosse Cardiac Rehabilitation Workshops, University of Wisconsin-La Crosse. Contact Philip Wilson, Executive Director, La Crosse Exercise Program, University of Wisconsin-La Crosse, La Crosse, Wisconsin 54601.

**26-28** La Crosse Cardiac Rehabilitation Seminar, Water Tower Hyatt, Chicago, Illinois. Contact Philip Wilson, Executive Director, La Crosse Exercise Program, University of Wisconsin-La Crosse, La Crosse, Wisconsin 54601.

### DECEMBER, 1979

**7-9** La Crosse Cardiac Rehabilitation Seminar, Hyatt Regency, Dallas, Texas. Contact Philip Wilson, Executive Director, La Crosse Exercise Program, University of Wisconsin-La Crosse, La Crosse, Wisconsin 54601.

### FEBRUARY, 1980

**26-28** Olympic Sports Medicine Conference, Boston, Massachusetts, Sheraton Hotel, presented by the U.S. Olympic Medical Committee with the assistance of the American Orthopaedic Society for Sports Medicine. Local course directors - Robert Leach, Dinesh Patel and Bertram Zarins.





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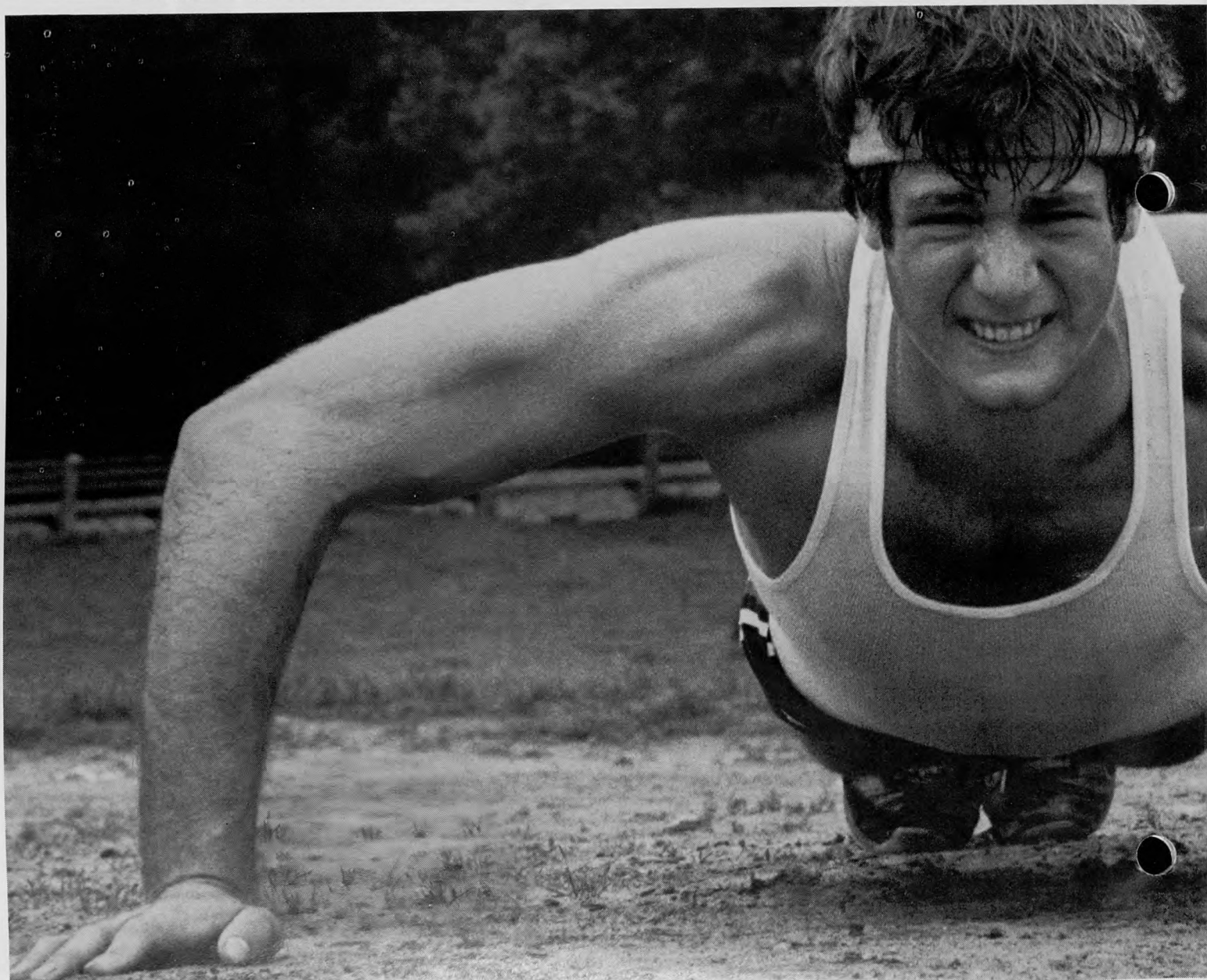
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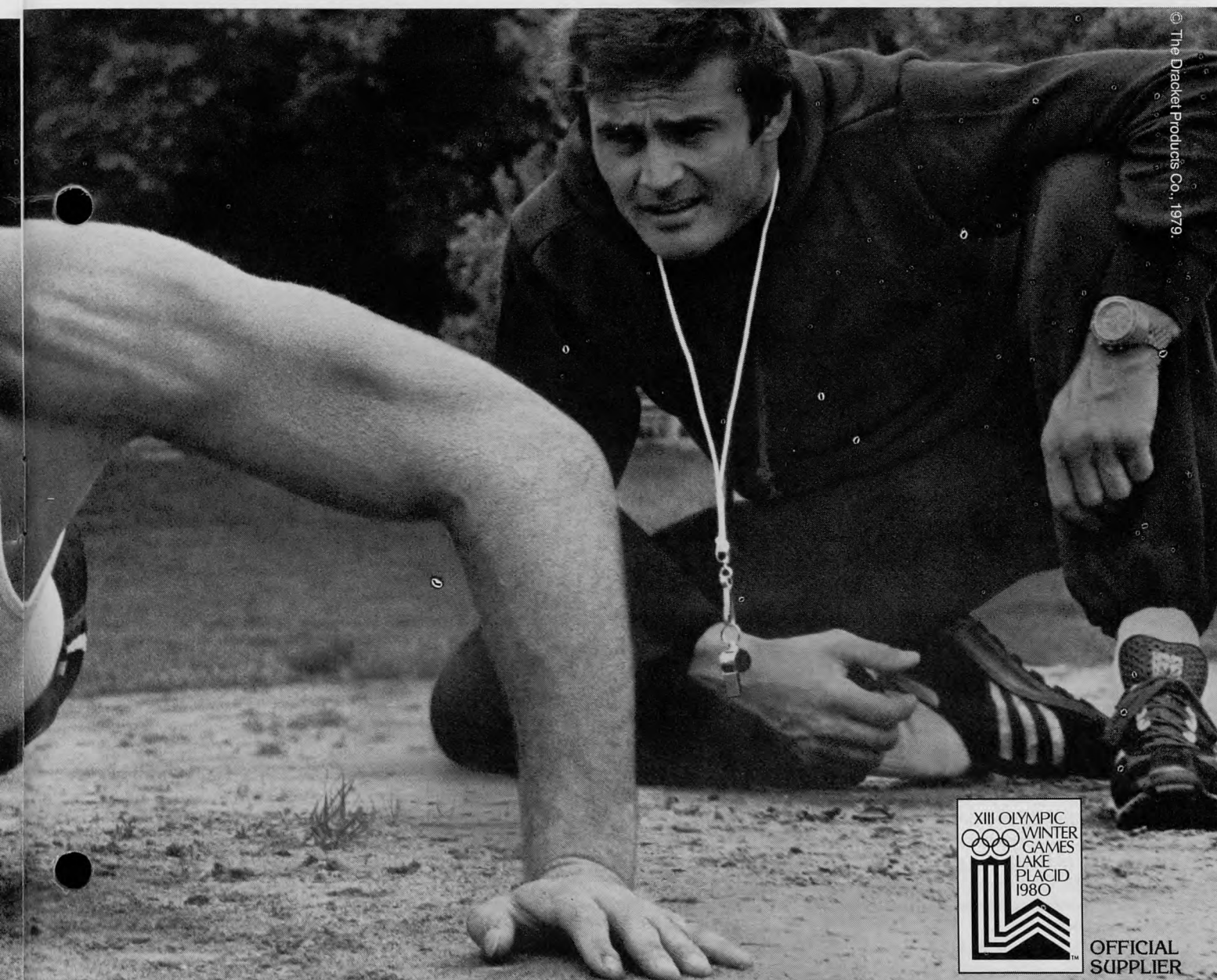
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# ANNOUNCEMENTS

## The Winner!

The winner of the First Annual N.A.T.A. Student Writing Contest is Lori Ames Galstad, Student Athletic Trainer and Student Physical Therapist at the University of Wisconsin-La Crosse.

Her winning paper entitled "Anterior Tibial Compartment Syndrome" can be found on page 139 of this issue of *Athletic Training*.

Congratulations Lori!

## The Professional Education Committee Announces The Presentation Of Its Fourth And Fifth Professional Preparation Conferences

During 1980, the NATA's Professional Education Committee will hold for the first time two professional preparation conferences. The first of these conferences will be held at the Opryland Hotel, Nashville, Tennessee on January 4, 5, and 6, 1980. The second conference will be held at Rickey's Hyatt House, Palo Alto, California on February 15, 16, 17, 1980. The format for both conferences will be very similar with the Friday sessions primarily designed for program directors of athletic training education programs and persons interested in athletic training education. The final two days of the conferences will be directed towards providing all certified athletic trainers with continuing education information on current issues and techniques for the prevention and care of athletic injuries.

Although the agendum for both conferences along with the lists of speakers are still in their final stages of preparation at this issue of the Journal's deadline for announcements, the speakers and their topics are being selected with the care that has made all of the previous conferences outstanding successes. Once again, the speakers will consist of a blend of outstanding physicians, medical specialists, athletic trainers, sports medicine lawyers, physical therapists and other sports medicine experts. The number of topics presented will be limited but given sufficient time for an in-depth presentation and allowance for ample discussion.

John Schrader, Indiana University is serving as the chairman for both conferences. More detailed information about the programs of these two conferences including speakers and topics may be obtained from him.

Jack Redgren, Vanderbilt University, is serving as site chairman for the Nashville Conference. Any information desired about housing should be directed to Mr. Redgren.

Gary Delforge, University of Arizona, and Lou Oster-nig, University of Oregon, are serving as site co-chairmen for the Palo Alto Conference. All information concerning housing at this conference should be directed to either of these co-chairmen.

The proceedings of both conferences will be recorded, edited, collated, and printed for publication. The

registration fees for any one of the conferences are \$35.00 for members of the NATA and \$70.00 for non-members. Make plans to attend one or both of these conferences early since the enrollment at each of these continuing education programs is limited to 250 participants. Don't become an obsolete athletic trainer - continue your education.

## Schedule of Future Sites and Dates N.A.T.A. Certification Examination

Revised: June 1979

### REGIONAL

(All regional sites subject to a minimum of five candidates per site and limited to a maximum of thirty candidates.)

#### January 20, 1980

New Haven, CT.  
(E.A.T.A.)  
Valparaiso, Indiana  
Tampa, Florida  
Forth Worth, Texas

Chattanooga, Tennessee  
Saratoga, California  
Portland, Oregon  
(All sites subject to change)

Deadline for requesting application forms:

October 15, 1979

Deadline for returning applications:

December 1, 1979

#### March 16, 1980

Tucson, Arizona  
Raleigh, North Carolina  
Pullman, Washington  
Odessa, Texas

West Chester, Pennsylvania  
Ann Arbor, Michigan  
Lincoln, Nebraska  
(March 21, 1980)  
Bloomington, Minnesota  
(March 21, 1980)  
(All sites subject to change)

Deadline for requesting application forms:

December 15, 1979

Deadline for returning applications:

February 1, 1980

### NATIONAL

June 8, 1980, National Convention Site: Philadelphia, Pennsylvania

(Subject to a maximum of 50 candidates — applications accepted in order of remittance — only 25 additional candidates accepted for written examinations)

#### August 3, 1980

Terre Haute, Indiana  
West Chester, Pennsylvania  
State College, Pennsylvania  
Walnut, California

Ames, Iowa  
Chattanooga, Tennessee  
Ann Arbor, Michigan  
New Britain, Connecticut  
(All sites subject to change)

Portland, Oregon

Deadline for requesting application forms:

March 15, 1980

Deadline for returning applications:

April 30, 1980



(Other site(s) if a minimum of 10 regional applicants creates such a demand.)

Application forms available from: N.A.T.A. Board of Certification

Valparaiso University  
Valparaiso, Indiana 46383

(Please indicate date you wish to take the exam when requesting application, also indicate the section under which you plan to apply — I, II, III, or IV)

**NOTE:** 1981 exam dates will approximate the 1980 dates and sites on a regional basis. The national exam will be at the site of the annual N.A.T.A. convention with similar numerical limitations.

**New Board of Certification Office Phone Number**  
219-462-5945 8:00 - 12:00 and 1:00 - 5:00 - Central Time

### *Continuing Education*

Continuing Education for the National Athletic Trainers Association is under way. While it is slow getting started there is one important item the membership can help us with.

As of this year we all have a six (6) digit membership number as well as our certification numbers. It is the six digit number that goes to the computer so please put this number on all reporting forms you send in for CEU. Without this information, the recording process is slowed considerably.

Many of you have raised questions concerning CEU, many of them valid. Keep two things in mind: (1) re-read the initial information and some of your questions will be

answered and (2) this is our initial endeavor and we are aware that at the conclusion of the initial three-year period review and revision will be necessary.

At this point we are doing our best to keep all members in all levels of employment in mind and will keep your best interest in mind where professionalism is concerned.

Thank you,  
Jack Redgren  
NATA Sub-Committee  
Continuing Education

### *A Timely Reminder . . .*

Your contributions and continuing support to the NATA Scholarship Fund are always welcome and are necessary so that the endowment goal of \$500,000 can become a reality. Please remember that our program of financial assistance is a four-fold one that offers scholarships, loans, grants and part-time employment. Organizational support from the NATA to the Fund continues, but your individual contributions are vital to the Scholarship Fund's ultimate success. All contributions are tax deductible. Won't you consider now the importance of your participation in the NATA Scholarship Fund? Make your checks payable to Scholarship Program, and mail them to this address: **William E. Newell, Purdue University Student Hospital, West Lafayette, Indiana 47907.**

### *Brochure Requests*

All requests for the brochure entitled "Careers in Athletic Training" should go to **Charles O. Demers, A.T.,C. Chairman, NATA Career Information Services, Athletic Department, Deerfield Academy, Deerfield, MA 01342.**

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## Guide to Contributors

*Athletic Training*, the Journal of the National Athletic Trainers Association, welcomes the submission of manuscripts which may be of interest to persons engaged in or concerned with the progress of the athletic training profession. The following recommendations are offered to those submitting manuscripts:

1. One original and five copies of the manuscript should be forwarded to the editor and each page typewritten on one side of 8½ x 11 inch plain paper, double spaced with one inch margins.
2. The first page of the manuscript should include title of paper, full name of author(s), academic degrees, name of the department and institution of author(s).

The second page should contain a brief biographical sketch of each author, suitable for publication with the article. A recent black and white glossy photograph of each author is also requested, but not mandatory.

The text of the article should begin on page three and is to be followed by the bibliography, tables, and illustrations and legends to illustrations in that order.

3. Photographs should be glossy black and white prints unless color is absolutely necessary to indicate detail. Graphs, charts, and figures should be of good quality and clearly presented on white paper with black ink, in a form which will be legible if reduced for publication. Legends to illustrations should be typed separate from the illustrations on a page following the last illustration. Copies of all illustrations should accompany each of the five copies of the manuscript.
4. It is the understanding of the editor of *Athletic Training* that manuscripts submitted will not have been either previously published or simultaneously submitted to another journal. The author accepts responsibility for any major corrections of the manuscript as suggested by the editor.
5. For reprints, authors are authorized to reproduce their material for their own use or reprints can be

reproduced at time of initial printing if the desired number of reprints is known.

6. References should be typewritten (double spaced) beginning on the first page following the manuscript. They must be alphabetized and numbered consecutively. Citations in the text of the manuscript should take the form of a number in parenthesis (7) directly after the name of the author being cited, or after the reference if the author's name is not used. The style of the references is that of Index Medicus. Examples of references to a journal, book, chapter in an edited book, and presentation at a meeting are illustrated below:
  1. Knight K: Preparation of manuscripts for publication. *Athletic Training* 11(3):127-129, 1976.
  2. Klafs CE, Arnheim DD: *Modern Principles of Athletic Training*. 4th edition. St. Louis, CV Mosby Co. 1977 p. 61.
  3. Albohm M: Common injuries in womens volleyball. *Relevant Topics in Athletic Training*. Edited by Scriber K, Burke EJ, Ithaca NY: Monument Publications, 1978, pp. 79-81.
  4. Behnke R: Licensure for athletic trainers: problems and solutions. Presented at the 29th Annual Meeting and Clinical Symposium of the National Athletic Trainers Association. Las Vega, Nev, June 15, 1978.
7. Potential authors are referred to reference 1 above, for help in preparing their manuscripts.
8. Unused manuscripts will be returned, when accompanied by a stamped, self-addressed envelope.
9. Manuscripts not following the preceeding procedures will be returned to the author.

Address all manuscripts to:

Clint Thompson  
Department of Athletics  
Michigan State University  
East Lansing, Michigan 48824

## Journal Deadlines

In order to avoid confusion and delays for any contributions you have for the Journal the deadlines for various sections of the Journal are provided below.

Send any materials for any section of the Journal other than formal articles and "Calendar of Events" to:

Ken Wolfert  
Miami University  
Oxford, OH 45056

This includes sections such as "Tips From the Field", "Announcements", "Case Studies", "Letters to the Editor", etc. The deadlines are:

Journal	Deadline
Fall Issue	July 15
Winter Issue	October 15
Spring Issue	January 15
Summer Issue	March 15

Deadline for "Calendar of Events": Information on upcoming events should be sent to:

Jeff Fair, ATC  
Athletic Department  
Oklahoma State University  
Stillwater, Oklahoma 74074

Fall Issue	July 1
Winter Issue	October 1
Spring Issue	January 1
Summer Issue	March 1

Articles must be sent to:

Clint Thompson, ATC  
Jenison Gym  
Michigan State University  
East Lansing, Michigan 48824

The Editorial Board will then review each article and work with authors to help prepare the articles for publication. Each article is handled on an individual basis.



## BOOK REVIEWS

### *Swimming Medicine IV* International Series on Sports Sciences Volume 6

by: Bengt Eriksson and Bengt Furberg  
List price: \$29.50  
421 pages  
University Park Press  
233 E. Redwood Street  
Baltimore, Maryland 21202

This book is volume 6 of the International Series on Sport Sciences and is a compilation of the research presented at the Fourth International Congress on Swimming Medicine in Stockholm, Sweden June 5-19, 1977. The

volume is divided into six sections: medicine, orthopedics, physiology, metabolism, thermoregulation, and biomechanics. All articles are concerned with competitive or therapeutic swimming or swimming for general fitness. The authors are international in nature and enable the reader the opportunity to read the scholarly works of non-English speaking experts in swimming medicine.

The sections on medicine and orthopedics are of the most value and interest to those in the athletic training profession. Included in the medicine section are reports of research on: the effects of training on female swimmers, swimming and asthma, the need for iron supplementation of young athletes, and ear problems among adolescents. The orthopedic section includes information on shoulder and low back problems among swimmers. The book's four other sections include studies on such topics as metabolic response to exercise, metabolic prediction of swimming performance, adaptation in skeletal muscle, blood lactic acid concentrations, acid-base equilibrium, the effects of water temperature on performance, and the biomechanical analysis of swimming.

The sections on medicine and orthopedics provide helpful information to the athletic trainer coach, or physician unfamiliar with the medical problems of competitive swimmers. As training in the sports of swimming becomes increasingly rigorous and as it now begins at an earlier age than ever before, medical care for the swimmer grows in complexity and in importance. While this book does not cover the entire subject, it does provide useful information on selected topics.

Other sections of the book provide valuable information for those interested in coaching and conducting research in the area of the physiology and biomechanics of swimming.

Kathleen Heck

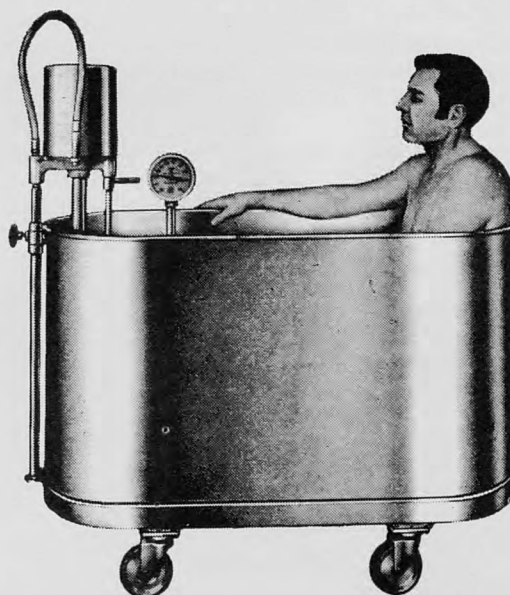
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*Muscles Alive - Their Functions Revealed by Electromyography*  
Fourth Edition

J.V. Basmajian, M.D.  
The Williams and Wilkins Company  
Baltimore, Maryland  
1979

This book is the "bible" for all serious students of human movement. It provides electromyographic evidence documenting the contributions of the different muscles surrounding a joint which gives validity to the kinesiological texts. The introduction is a well written history of MEG and its relationship to muscle. There follow discussions of apparatus and technique, electrical manifestations of fatigue, muscle tone, and the effects of various outside influences and pathologies on muscle. Chapter three is completely new. It replaces a guest author's very confusing chapter on synthetic integration of MEG waves with an equally confusing chapter proposing a mathematical interpretation of the Motor Unit Action Potential Train (the firing pattern for any particular motor unit). The meat of this book, however, is the discussion of the muscles themselves in relation to the various movements.

The only major weaknesses of the book are matters of incompleteness rather than any error. There is a failure to discuss sequential motor patterns. An example would be in the overhand throwing pattern where the hip joint is extending at the same time the knee joint is extending. The hamstrings group crosses both joints and is a hip joint extensor, but it is a knee joint flexor. The relative contributions of the quadriceps at the knee and the hamstrings at the hip (antagonist at the knee) are puzzling and unanswered. At the shoulder one movement combination has been virtually ignored, that of horizontal flexion and horizontal extension (see Rasch and Burke, *Kinesiology and Applied Anatomy*, 6th edition, 1978). This is particularly important in athletics where high velocity overhand throw patterns dominate so much of team and dual sports competition and where at the shoulder the major forces are supplied by horizontal flexion and inward rotation.

Of special interest are the units on different grips, hand musculature, the elbow (particularly the demonstration of brachialis as the chief elbow flexor and pronator quadratus as the chief pronator of the radio-ulnar joint) and the shoulder. The discussion of the rotator cuff, particularly supraspinatus, in preventing dislocation of the shoulder is excellent.

In summary, this is the number one resource book in the field of electromyography, but much work remains to be done to solidify our knowledge. As DeLuca stated in Chapter three, "It is clear . . . that at the present time there is no definite explanation of motor unit behavior during muscle contractions. The apparent contradictions . . . are likely due to disparity in the too few studies that have been performed." This work helps the clinician begin to make sense of the field of electromyography and its potential contributions to the study of muscle and exercise.

James M. Rankin A.T.,C.

*Growing With Sports*

(National Federation Press Service) . . . "A Parent's Guide To The Young Athlete" is the subtitle of this valuable addition to the sports library of athletic ad-

ministrators and the "how to" library of all who are parents of athletic youth.

*Growing with Sports* is as multifaceted in contents as its principal author is in interests. Ernest M. Vandeweghe practices pediatrics and he is a member of the UCLA Medical School instructional staff. He is a former professional basketball player and a collegiate all-American in both basketball and soccer. He is now the parent of athletes, including a son who is an outstanding basketball player and a daughter who is a world-class swimmer.

Dr. Vandeweghe discusses the value of athletic participation in his personal life and to his entire family. He offers advice for sustaining youths' interest in sport. He examines exercises, injuries and nutrition. He writes sensibly about alcohol, drugs and smoking.

Portraits of successful athletes and glimpses at the lives at Dr. Vandeweghe and his family combine with otherwise clinical material to make a most readable publication.

*Growing with Sports* is a Prentice-Hall publication, selling for \$9.95. It is 207 pages long and is illustrated. Co-author is George L. Flynn.

*The Biomechanics of Sports Techniques*  
2nd edition

by: James G. Hay  
List Price: \$14.95  
508 pages - illustrated  
Prentice - Hall, Inc.  
Englewood Cliffs, N.J. 07632

This text, in three sections, examines the subject of biomechanics in an effort to provide a sound, scientific basis for the analysis of the techniques applied in sports.

The first part of the text defines and explains the function of biomechanics and describes its importance to the physical educator, the coach, and the athlete. In answering the numerous questions posed in this section, the single and most important answer is that biomechanics is the science underlying sport techniques.

Part two of the text concerns itself with the basic concepts of biomechanics. In this chapter, motion is described as translation or rotation or some particular combination of the two. Other topics in this section are linear kinematics and kinetics, angular kinematics and kinetics, and fluid mechanics. This material is presented progressively, allowing the reader to understand each concept as it is presented.

The basic biomechanical considerations of nine sporting events are explained in part three. The author has chosen to write a more detailed analysis of a few sports as opposed to writing short analyses of a large number of sports. The sports discussed are: baseball, basketball, football, golf, gymnastics, softball, swimming, track and field running, jumping and throwing.

This section is concerned with the basic biomechanical factors involved in the performance of each technique, and with how these factors interrelate to produce the desired result. Also covered is a detailed discussion of specific biomechanical techniques.

The author of this text has presented biomechanics in a manner easily understood and has shown the importance of biomechanics not only to physical educators, coaches, and athletes, but to athletic trainers as well. This text could be very beneficial to anyone that is interested in the biomechanics of sports techniques.

Don Kaverman, A.T.C.



## POTPOURRI

By Dennis Aten, ATC  
EASTERN ILLINOIS UNIVERSITY

### Self Help Home Health Care

According to *Family Weekly*, you often don't need a doctor to tackle common medical situations. All you need is to learn enough about your body so that you can work in conjunction with your doctor if something does go wrong. Now, the Public Broadcasting System is airing "Here's to Your Health," a series geared solely to providing self-help information to the consumer. Hosted by a number of Academy and Emmy award-winning stars and featuring physicians who are tops in their field, the series is being broadcast nationwide. Check local listings for the time in your area.

### Out-of-Date Thermometer?

An article in a recent issue of the *American Journal of Nursing* tells of a test made on more than 200 top-grade clinical thermometers. A reading was taken when the thermometers were brand-new and again ten months later, after they had been used for two months and then stored away for eight more months. The findings? Almost all the thermometers were accurate to within a tenth of a degree when new, but ten months later one in four was in-

correct — often seriously.

The moral seems to be that a thermometer is cheap enough to buy, and important enough to your health when really needed, so that you ought to have an accurate one in your medicine cabinet.

### National Athletic Head & Neck Injury Registry Now in Philadelphia

The National Athletic Head and Neck Injury Registry (formerly National Football Head and Neck Injury Registry) has relocated at the University of Pennsylvania Sports Medicine Center in Philadelphia.

Along with its relocation, the Registry's purpose and function has been redefined to include documentation of serious head and neck injuries occurring in all recreational and competitive athletic activities. As previously, there will be a joint effort with the National Athletic Trainers Association.

The registry is soliciting information regarding head and neck injuries sustained as a result of any sporting activity that — requires hospitalization for more than 72 hours, requires surgical intervention, involves a fracture and/or dislocation, or results in permanent paralysis or death. Also to be documented are all brachial plexus neuropraxia and axonotmeses.

Information should include the name of the involved individual, his or her school, home address, attending physician, and if known, diagnosis. All information will be held in confidence and used only for epidemiologic survey purposes. Data will be the property of the University of Pennsylvania Sports Medicine Center and in no instances



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will individuals or schools be identified in subsequent reports.

All correspondence should be addressed to the Registry at the UP Sports Medicine Center, 3400 Spruce Street, Philadelphia, PA 19104.

## Visual Problems Clues

Optometrist, Dr. Garner, listed the following guidelines for recognizing visual problems in January-February 1979 issue of *United States Sports Academy News*.

1. Athletes that squint to see clearly at a distance could have a vision problem in one or both eyes.
2. Athletes who are constantly rubbing their eyes or who suffer from headaches, eye redness, or excessive tearing could have visual fatigue (eye strain) which would tend to tire their body and impair their physical ability, thereby making them more injury prone.
3. Athletes that wear glasses regularly off the court should wear athletic glasses or Contact Lenses. Metal frames should *not* be worn for sports activities.
4. Plastic lenses are highly recommended for sports participation because they have a higher resistance to breakage, are 50 to 60 percent lighter than the same prescription in glass, given less surface reflection and are less apt to fog. Glass lenses even though they are now required by Federal Law to be heat-treated are considered impact resistant but are *not* unbreakable.
5. Glass lenses will steam up and fog during a game; this is especially true when players perspire freely. This can be prevented by cleaning the glasses

during the game with a steam-preventing, anti-static lens cleaner.

6. Athletes that wear Contact Lenses should have a spare pair of glasses available in the event they lose or damage a lens during a game. The spare pair (or glasses) should be kept by the trainer or one of the student managers.
7. If the Contact Lens become uncomfortable or smeared during the game, or if it drops from the eye, it should be re-cleaned with a contact lens solution before being re-inserted in the eye.

In conclusion — if an athlete needs vision care — see that he receives it. If he has glasses — see that he wears them!

## Poison Prevention

The United States Consumer Product Safety Commission reminds us to keep all warning labels on medicines and related materials. It becomes easy for trainers to repackage medicines for storage in their kits, thus discarding the usual labels. This makes the trainer's kit, already an attractive nuisance for athletes, even more of a hazard area.

Even though athletic trainer's kits may be private property, unless it is always kept in a safe, secure place and its contents properly labeled, there is an increased chance for mistakes in medication given to athletes.

## New Dimension in Emergency Care Training

"Emergency Care and Transportation of the Sick and Injured (ECT)," the Academy's widely acclaimed emergency medical technician (EMT) training program, has been given the added dimension of video.

A series of 26 video cassettes has been developed to supplement and expand upon the other two EMT training tools already produced by AAOS — The ECT text and ECT slide program.

John B. McGinty, MD, who is chairman of the Committee on Video Education says, "It's a powerful training tool designed to supplement a basic program or, in combination with the ECT text, to provide a comprehensive curriculum at several levels, including post graduate."

The full color tapes cover every topic from basic medical subjects, such as respiratory and circulatory systems, to the highly specific duties and legal responsibilities of an EMT. Further, they demonstrate the real-life conditions that exist in emergency situations.

They're available in either  $\frac{3}{4}$ " or  $\frac{1}{2}$ " size and each one runs approximately 20 minutes in length.

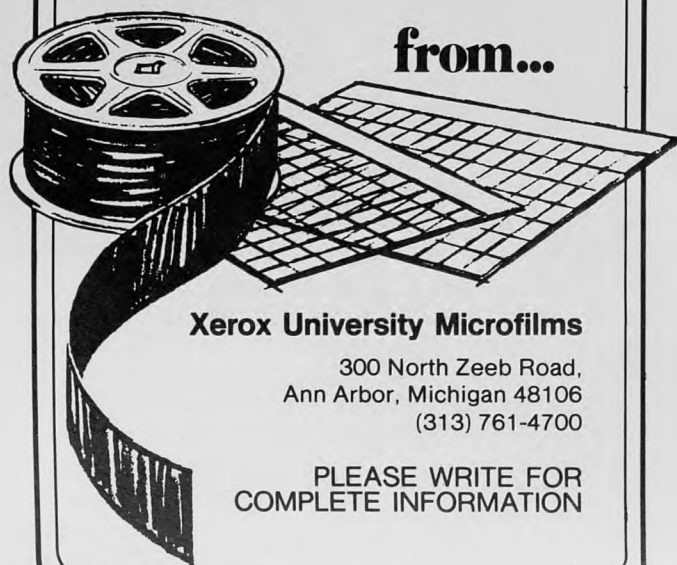
Each program unit was written by the same physicians who authored the ECT, which we used as a medical reference for the U.S. Department of Transportation's (DOT) current emergency training course. The production team was drawn from the University of Michigan's Biomedical Media Unit.

The series will be available for classroom use in September 1979. In the meantime, a six-minute preview tape is available free to qualified individuals/or institutions upon request. Cost of the 26-tape series (which includes an instructor's copy of the ECT text, ECT workbook and answer book) has been set at \$2,500.

The ECT text, called the most authoritative and widely used text on this subject ever published, has been updated in preparation for use in the expanded program. Some chapters have been modified or expanded to include the latest information available. And new chapters have been added, including one on basic life support, developed in conjunction with the American Heart Association.

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# Schering

## The 1979 Schering Symposium

### Functional Anatomy and Biomechanics of the Wrist and Elbow Joints



By  
**VINCENT J. DISTEFANO, M.D.**  
Associate Clinical Professor of Orthopaedic Surgery,  
Hospital of the University of Pennsylvania

The upper extremity may be considered from a functional standpoint as consisting of three major segments: the brachium or upper arm, the antebrachium or forearm and the hand. These segments are mechanically linked by the elbow and wrist joints.

*Dr. DiStefano was the moderator for the 1975-1978 Schering Symposiums. He is an Associate Orthopedic Surgeon at the hospital of the University of Pennsylvania and affiliated hospitals. He also serves as team physician for the Philadelphia Eagles, and physician for Villanova University. Dr. DiStefano received his M.D. from Hahnemann Medical College in 1963. He is a member of many committees and organizations dealing in sports medicine.*

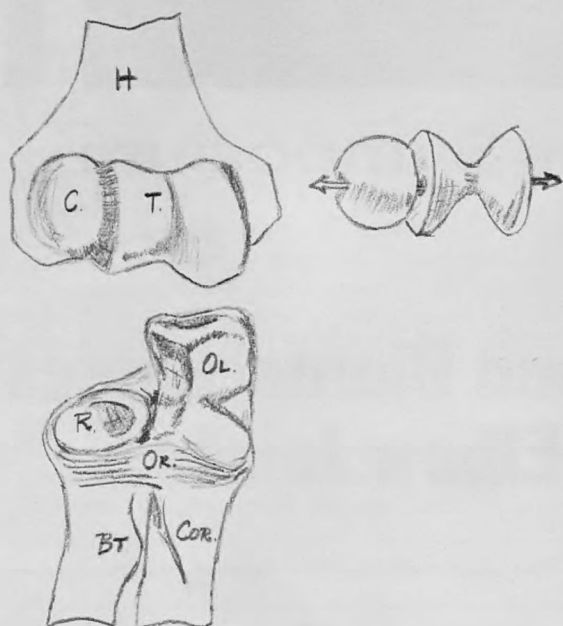
#### ELBOW

##### Skeletal Anatomy and Motion

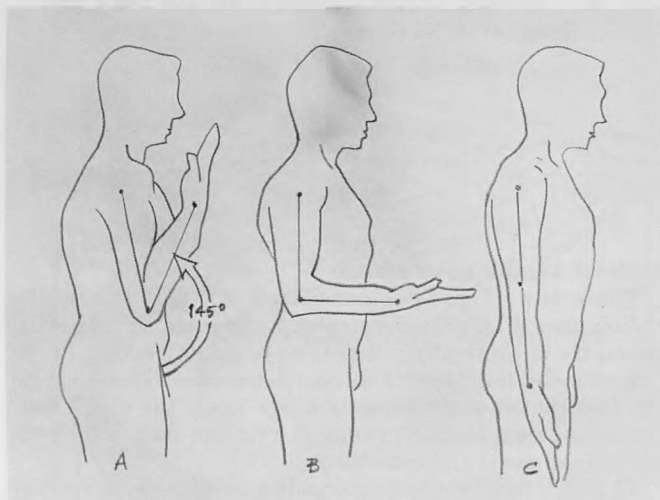
The elbow (Fig. 1) is comprised of three joints, the radiohumeral, ulnohumeral and radioulnar. The spatial geometry of these joints is such as to grant freedom in the flexion-extension, as well as rotation modes. Thus despite the fact that it is primarily a hinge joint, the elbow participates in supination-pronation rotation maneuvers via its radiohumeral and radioulnar joints.

The distal end of the humerus is molded to form two articular surfaces, the trochlea is pulley-shaped and is contiguous on its lateral aspect with the hemisphere capitellum. This configuration has been likened to a ball and spool threaded on the same axis. Unlike the

capitellum, the trochlea extends posteriorly and is encircled by the deep socket formed by the coronoid and olecranon processes of the proximal ulna, creating a true hinge joint which permits only flexion and extension. In full extension, the joint is stable due to lock of the olecranon in the olecranon fossa, the hollowed posterior surface of the distal humerus. The buttonlike head of the proximal radius contains a concavity corresponding to the convexity of the humeral capitellum. During flexion and extension, the radial head glides over the capitellum from front to back; during rotation it rotates on the capitellum. The radiohumeral joint is considerably more unstable than its neighbor and is often dislocated in conjunction



**Figure 1.** Skeletal anatomy, elbow joint. H - humerus; capitellum (c) and trochlea (T) of humerus. R - radius; OL - olecranon; OR - orbicular ligament; BT - Bicipital tuberosity of radius; Cor. - coronoid process of ulna. Note resemblance of capitellum and trochlea to ball and spool arrangement. (Modified from Kapandji, L.A.: *The Physiology of the Joints*. Vol. 2, Upper Limb. Ed. 2, Edinburgh, 1970, Churchill Livingstone).



**Figure 2.** Flexion-extension movement at elbow joint. 2C - position of reference, 0°; 2B - 90° flexion; 2A - limit of active flexion, 145°. (modified from . . . .)

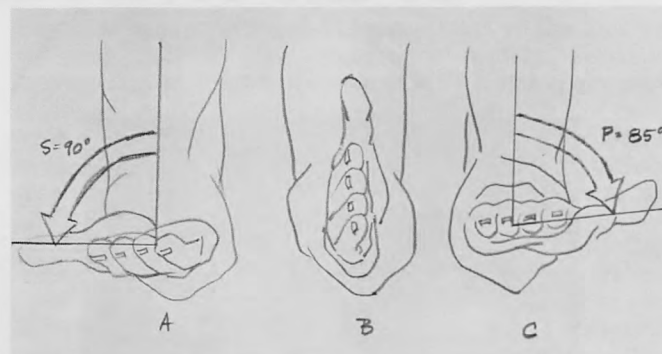
with fractures of the proximal ulna, the so-called Monteggia Fracture. The normal extended elbow has a valgus posture or "carrying angle" which varies from 5° to 20° depending on the shape of the trochlea.

The position of reference with respect to movement at the elbow is defined as the position achieved when the axes of the upper arm and forearm are in a straight line and is represented with the upper extremity lying at the side and the palms facing forward (Fig. 2). The position of reference corresponds to complete extension or 0°. Five or ten degrees of further extension or hyperextension is possible to 145° and passive flexion to 160°. Rotation at the elbow is discussed with the elbow flexed at 90°. The reference position of neutral rotation is attained when the palm faces medially and the thumb points superiorly. Rotation of the thumb medially from this position bringing the palm inferiorward is termed pronation, and is possible to 85°. The opposite motion, or palm-up rotation defines supination which is possible to 90°. (Fig. 3)

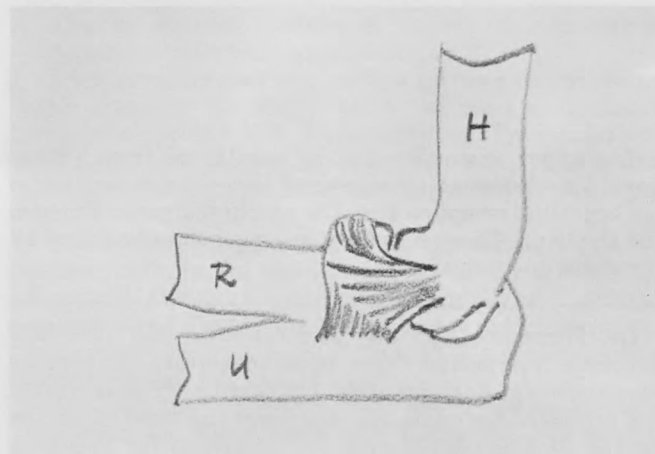
### Ligaments

There are three principal ligaments of the elbow joint whose function it is to keep the articular surfaces in apposition and prevent abnormal side to side movement.

1. Annular (Orbicular) ligament (Figs. 1,4,5). This firm fibrous ring completely surrounds the radial head and neck, securing it anteriorly and posteriorly to the radial fossa of the ulna, thus stabilizing the ulnar joint.
2. Lateral collateral ligament (Fig. 4). This thin triangular ligament originates immediately beneath the lateral epicondyle of the humerus and sends



**Figure 3.** Elbow rotation. 3B - reference position of neutral rotation; 3A - supination to 90°; 3C - pronation to 85°. (modified from . . . .)

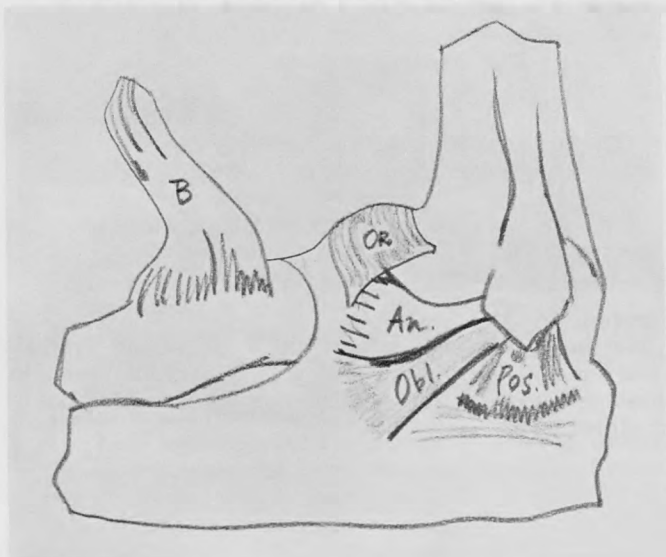


**Figure 4.** Ligaments, Lateral Elbow. Fibers of the lateral ligament diverge to the anterior and posterior aspects of the annular (orbicular) ligament.



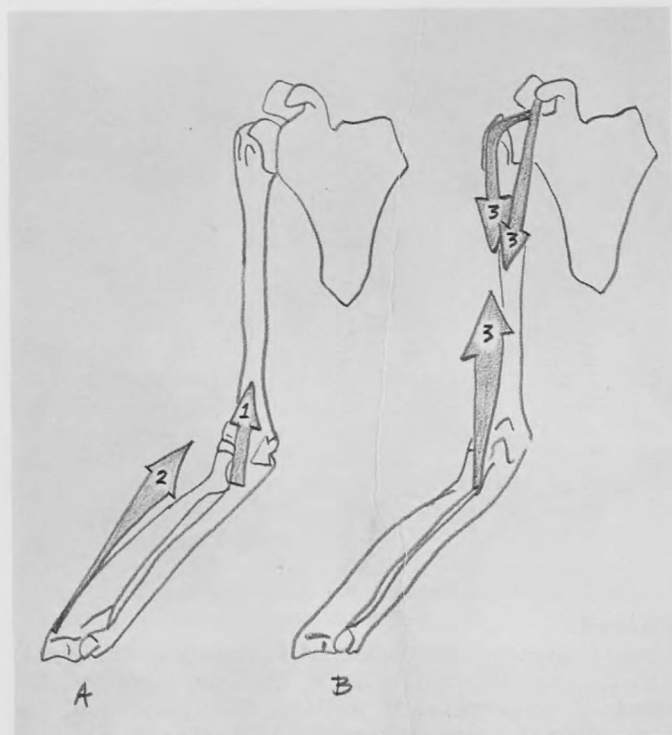
diverging bands to the anterior and posterior aspects of the annular (orbicular) ligament.

3. Medial Collateral Ligament (Fig. 5). A three part structure composed of anterior, posterior and oblique fibers. The anterior fibers are thick and strong, and extend from the medial epicondyle of the humerus to the medial aspect of the coronoid process of the ulna. The posterior fibers are weaker and pass from the medial epicondyle to the medial wall of the olecranon. The oblique fibers bridge the notch between the olecranon and coronoid process and do not contribute much to joint stability. The anterior fibers are taut with the joint in extension,



**Figure 5.**

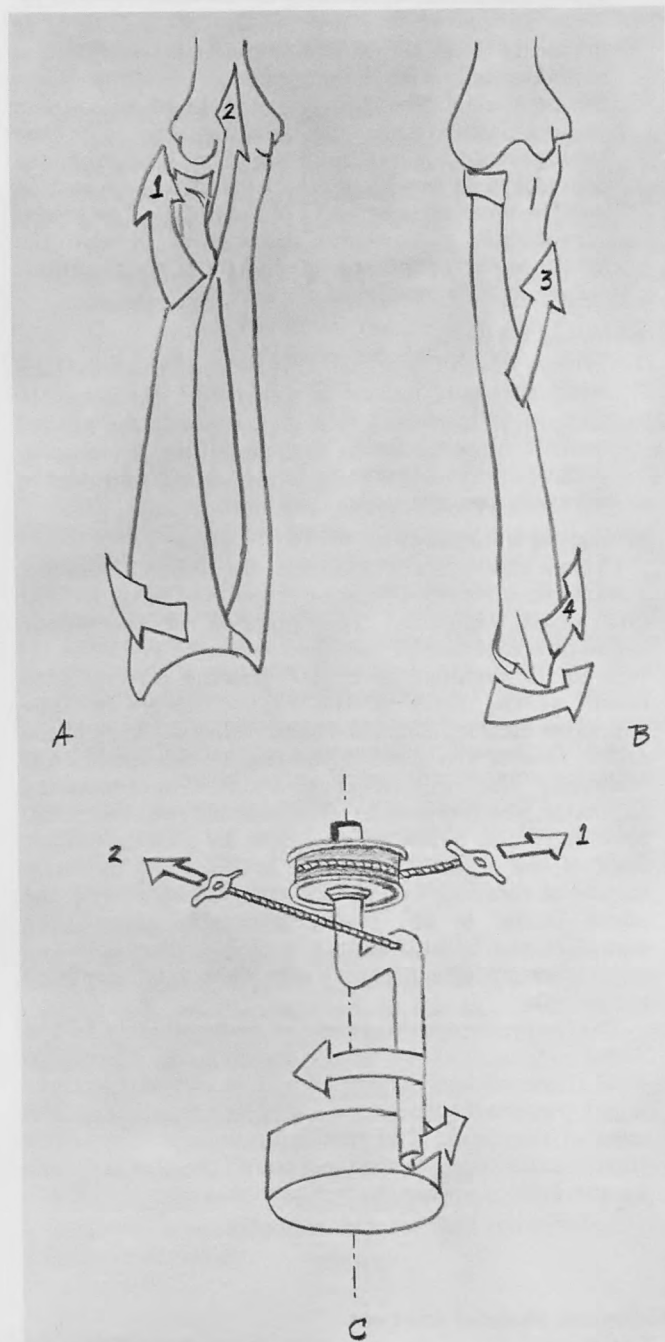
Ligaments, medial elbow. Components of medial collateral ligament: An - anterior fibers, Obl. - oblique fibers, Pos - posterior fibers. OR - orbicular ligament. B - tendon of biceps brachii seen inserting into bicipital tuberosity of the radius. (modified from . . . .)



**Figure 6.**

Flexor muscles, elbow. 1. Brachialis; 2. Brachioradialis, 3. Biceps brachii: short and long heads (arrows down) and common insertion (arrow up). (modified from . . . .)

the posterior fibers in flexion. The elbow is least stable between these extremes at approximately  $45^\circ$  of flexion when the ligaments are most lax. Much like the medial side of the knee, the medial elbow may be stress tested for ligamentous instability by applying valgus stress after first flexing the elbow to  $15^\circ$  to  $20^\circ$  in order to "unlock" the olecranon from the olecranon process of the humerus. Such instability can be demonstrated radiographically with a gravity stress test. The patient is placed supine with the corresponding shoulder externally rotated and the elbow flexed  $15^\circ$  to  $20^\circ$ . If the elbow is unstable, the weight of the forearm will usually exert enough valgus force to open the medial side, but 1 to



**Figure 7.**

Muscles of rotation, elbow. 7A - Supination: 1 - supinator, 2. biceps brachii.

7B - Pronation: 3 - pronator teres; 4 - pronator quadratus

7C - actions of supinators and pronators likened to crank mechanism. 1. - simulates action of supinator and pronator quadratus muscles. 2. - simulates action of biceps brachii and pronator teres. (modified from . . . .)

2 pounds of weight may be added to the wrist for increased diagnostic accuracy.

## Muscles

The muscles which move the elbow joint may be divided into three categories: those which produce flexion, extension and rotation.

### Flexor Muscles (Fig. 6)

1. Brachialis. This muscle originates from the front of the lower half of the humerus, descends on the anterior capsule of the elbow joint and inserts on the coronoid process of the ulna. It is a powerful flexor of the elbow and does not contribute to rotation.
2. Brachioradialis. A long muscle which originates above the lateral epicondyle of the humerus and inserts on the styloid process of the radius. It is primarily a flexor of the elbow and becomes a supinator only with the wrist in extreme pronation.
3. Biceps Brachii. The main flexor of the elbow consists of two heads: the long head arising from the supraglenoid tubercle, and the short head from the coracoid process which inserts via a common tendon into the bicipital tuberosity of the radius. The biceps is not only a powerful flexor, but is also the most powerful supinator of the elbow, these actions occurring independent of one another.

### Extensor Muscles

1. Triceps Brachii. The sole extensor of the elbow (the small anconeus muscle is generally considered to play an insignificant role in extending the elbow) consists of three fleshy muscle bellies, which converge to form a common tendon inserted into the olecranon process of the ulna.

### Muscles of Rotation (Fig. 7)

From a mechanical standpoint, the radius resembles a crank; functionally it may be considered to be divided into three segments. The junction of the upper segment comprised of the head and neck with the intermediate segment, is angled forming a "supinator bend" at the level of the radial tuberosity. The supinator muscle, which is wound round the neck of the radius (one of the arms of the crank), supinates as it "unwinds" during active contraction. The remaining supinator, the biceps brachii is inserted into the radial tuberosity and performs its action by pulling on this apex of the crank. The biceps is the most powerful muscle of rotation, and is maximally efficient with the elbow flexed to 90°. For this reason, screws are manufactured to tighten in a clockwise direction, i.e., supination mode for the majority right hand dominant individuals.

The intermediate segment of the radius joins the distal segment at an angle forming the "pronator bend", the site of attachment of the pronator teres which performs its action by applying traction on this apex of the crank. The remaining muscle of rotation, the pronator teres, is wrapped round the ulna, and acts by unwinding, so that the radius moves over the ulna.

## WRIST

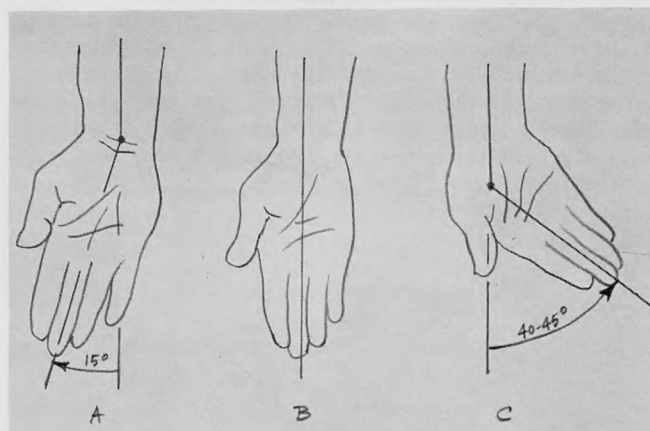
### Motion and Skeletal Anatomy

The wrist joint is charged with the responsibility for the finite adjustments which allow the hand to assume to optimal positions for power movement and prehension. It is capable of the basic movements of flexion-extension and abduction-adduction as well as circumduction which results from combining these basic motions.

Flexion and extension are both possible to 85° beginning from the reference position with the posterior aspect of the hand in line with the posterior aspect of the forearm.

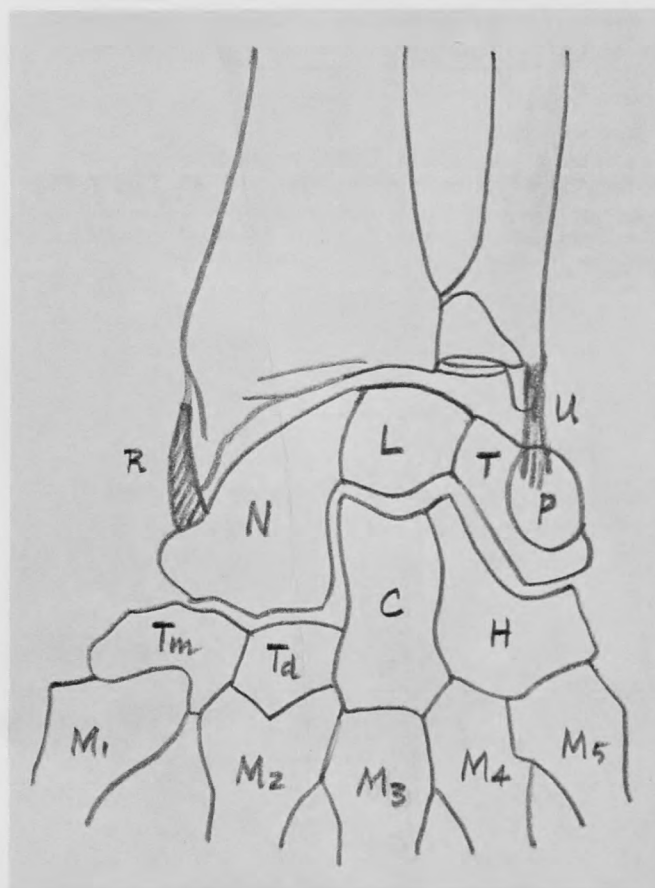
Adduction-abduction are measured from this same reference position as the hand deviates from an imaginary line through the long finger, third metacarpal and longitudinal axis of the forearm. Abduction is defined as movement from this line toward the radial side of the forearm and is checked at 15°. The opposite motion, adduction or ulnar deviation is possible at 45° (Fig. 8).

From a functional standpoint, the wrist is composed of



**Figure 8.**

Abduction-Adduction, wrist. 8A - abduction (radial deviation), 8B - reference position, imaginary line through third metacarpal; 8C - adduction (ulnar deviation). (modified from . . .)



**Figure 9.**

Skeletal anatomy and collateral ligaments of the wrist. Proximal row of carpal bones: N - navicular (scaphoid), L - lunate, T - triquetrum, P - pisiform; distal carpal row: Tm - trapezium (greater multangular), Td - trapezoid (lesser multangular), C - capitate, H - hamate. Metacarpals: M1 - 1st metacarpal . . . M5, 5th metacarpal. R - radial (lateral) collateral ligament; U - ulnar (medial) collateral ligament. (modified from . . .)



two joints, the radiocarpal joint between the radius and proximal row of carpal bones, and the midcarpal joint between the proximal and distal carpal rows (Fig. 9). From radial to ulnar side, the proximal row is composed of the navicular (scaphoid), lunate, triquetrum and pisiform, the latter overlying the triquetrum. The proximal articular surface of this row is ellipsoidal in shape, and allows flexion-extension as well as abduction-adduction. The distal carpal row is composed of the following bones from radial to ulnar side: trapezium, trapezoid (or greater and lesser multangular) capitate and hamate. The irregular contour of the mid carpal joint allows less motion, and as a consequence, movements at this joint result mainly from the elasticity of the restraining capsuloligamentous complexes. The axis of flexion and extension passes between the lunate and capitate and the axis of abduction and adduction through the head of the capitate.

### Ligaments

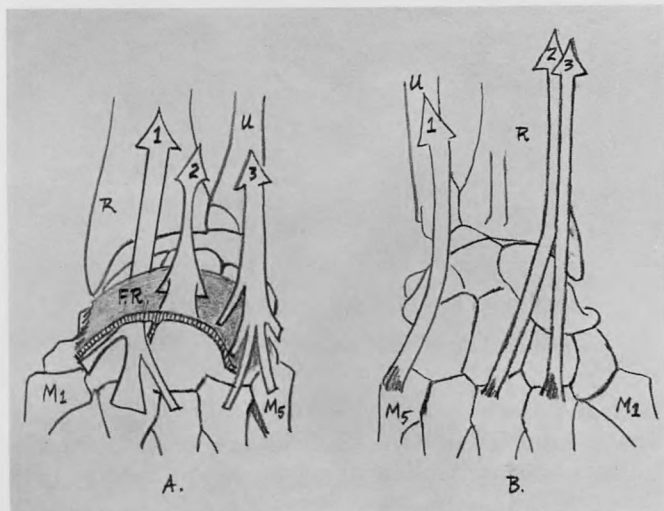
The ligaments of the radiocarpal joint are arranged into two groups; the collateral and the anterior and posterior ligaments.

#### Collateral Ligaments (Fig. 9)

1. Lateral radial collateral ligament. This is attached to the styloid process of the radius and the navicular.
2. Medial ulnar collateral ligament. This is attached proximally to the styloid process of the ulna, and distally to the pisiform and triquetrum bones.

#### Anterior and Posterior Ligaments

These ligaments for the most part, are represented by distinct areas of thickening of the respective anterior and posterior joint capsules, and need not be considered as separate entities here.



**Figure 10.**

10A - Flexor muscles, wrist: 1 - Flexor carpi radialis; 2 - palmaris longus, 3 - flexor carpi ulnaris.

FR - flexor retinaculum (shaded); R - radius; U - ulna; M1 - 1st metacarpal; M5 - 5th metacarpal.

10B - Extensor muscles, wrist: 1 - Extensor carpi ulnaris, 2 - Extensor carpi radialis brevis, 3 - Extensor carpi radialis longus. (modified from . . .)

### Muscles

The muscles which move the wrist may be placed in two categories. The flexors on the volar aspect, and the extensors on the dorsal aspect. The tendons which motor the thumb are excluded from this discussion.

#### Flexor Muscles (Fig. 10A)

1. Flexor Carpi Radialis. Inserted into the base of the second metacarpal.
2. Palmaris Longus. Inserted into the apex of the palmar aponeurosis. Variable, and often absent, it is functionally not important, being used by surgeons as a tendon graft.
3. Flexor Carpi Ulnaris. Broad insertion into the styloid process of the ulna, pisiform, hook of the hamate and bases of the fourth and fifth metacarpals. This muscle is a potent wrist flexor which also stabilizes the wrist for power function in the ulnar deviated position.

#### Extensor Muscle (Fig. 10B)

1. Extensor Carpi Ulnaris. Inserts into the medial side of the base of the fifth metacarpal. It aids in maintaining the wrist extension and ulnar deviation necessary for firm grip.
2. Extensor Carpi Radialis Longus and Brevis. Insert into dorsal aspect of the bases of the second and third metacarpals respectively. The main function of these muscles is to set the wrist in extension in order to allow maximum use of the finger flexors.

#### Synergists

The wrist extensors are prime examples of muscular synergy or combined action. Fixation muscles are muscles that steady one part thereby providing a firm base for movements executed by other muscles. Synergists are examples of fixation muscles and control movement at proximal joints in order for prime movers to exert their action upon a distal joint. The main function of the wrist extensors is to fix the wrist in extension, so that the finger flexors are optimally powerful. The fingers lose their grip when the wrist is held in flexion, due to a tenodesis effect caused by stretching of the finger extensors. Thus these muscle groups function in a synergistic manner with the extensors controlling or fixing the proximal wrist joint while the flexors clench the fingers. The functional position of the wrist corresponds to the position of maximal efficiency and is achieved with the wrist extended to 45° and ulnarly deviated 15°.

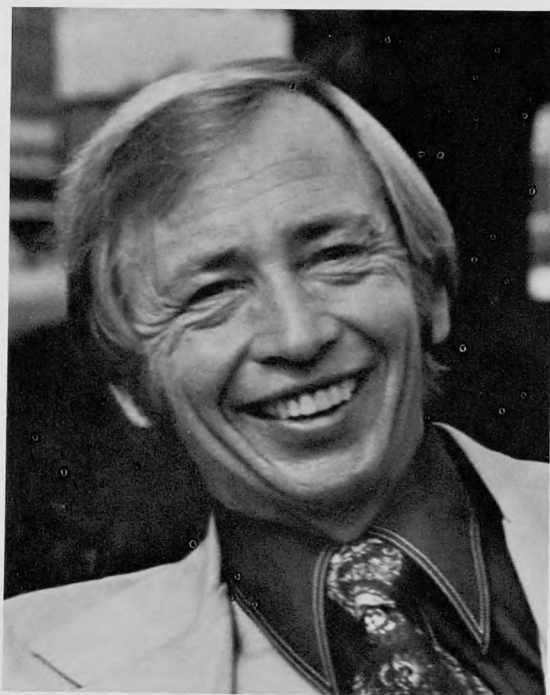
#### Adduction-Abduction

The extensors and flexors of the wrist produce adduction and abduction by virtue of their insertions on either side of the anteroposterior axis of wrist motion passing through the head of the capitate. Those tendons inserting on the ulnar side of the axis, produce adduction or ulnar deviation: flexor and extensor carpi ulnaris; those inserting on the radial side of the axis produce abduction or radial deviation: flexor carpi radialis, extensor carpi radialis longus, and palmaris longus. The extensor carpi radialis brevis, by virtue of its central insertion, is the prime wrist extensor, but does not contribute to radial or ulnar deviation.

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# PRESIDENTIAL CANDIDATES



## BILL CHAMBERS

Bill Chambers has been the Head Athletic Trainer at Fullerton Junior College, Fullerton, California since 1962. He attended the University of Oklahoma and is a graduate of the University of Missouri, completing a degree in physiology and hygiene. He is married, father of two. In addition to his responsibilities to the 12 sport intercollegiate program at Fullerton Junior College, he teaches courses in prevention and care of athletic injuries. He also teaches graduate courses, in extension, on medical supervision of athletes for McPherson College, McPherson, Kansas.

Mr. Chambers began his career serving as a student trainer at the University of Oklahoma for 4 years and University of Missouri for 3 years. He has been selected as a trainer for the East - West Shrine Basketball Game in Kansas City, 1960 - 1962, USA - USSR Track Meet, Los Angeles, 1966, British Commonwealth Games, Los Angeles, 1968, Pan Africa - USA International Games, Durham, North Carolina,

1971 and the Pan American Games, Cali, Columbia, South America in 1971. He was also selected as the National Junior College Trainer of the Year in both 1976 and 1977.

Bill has been a member of the National Athletic Trainers' since 1964 and was certified in 1970 when the organization began certifying members. Since 1964, he has served on the Board of Directors for 2 terms and has been a member of both the ethics and publicity committee. He has been a National Program speaker 3 times: in 1964, 1971 and 1977. He was the Convention Chairman in 1975 and 1978. Mr. Chambers has served as President of the National Athletic Trainers' Association since 1978.

*Member of the American Orthopedic Society of Sports Medicine; Meeting Planners International; Advisory Board of National Athletic Health Institute; Editorial Board of Sportsmedicine Digest.*





# NATIONAL ATHLETIC TRAINERS ASSOCIATION



## LARRY STANDIFER

Larry Standifer has been the Head Athletic Trainer at the University of Oregon since 1968. He received his Bachelor of Arts Degree in Biology at Williamette University in Oregon. After obtaining his physical therapy certificate he was the head physical therapist for two orthopedists at Salem Clinic in Oregon. He is married to the former Mary Polales, and they are the parents of three children.

Mr. Standifer has held the position as head athletic trainer and physical therapist for the Athletic Department of the University of Oregon since 1968. Larry was the head trainer for the Olympic Development Meet in 1968, head trainer for the United States Olympic Track and Field Trials in 1972, and 1976 and will be again in 1980. He served as head trainer for the National AAU Track and Field Meet in 1971 and 1975. He was head trainer for the National Greco - Romo Wrestling Cham-

pionships in 1971 and 1972. Larry has been the host trainer for the NCAA Track and Field Championships in 1972, 1975 and 1978. He also served as host trainer for the NCAA Gymnastics Championships and the NCAA Golf Championships in 1978.

Mr. Standifer is now an Associate Professor in the Physical Education Department teaching athletic injuries. He is a member of the American Physical Therapy Association, Oregon Physical Therapy Association, American College of Sports Medicine, the Northwest Athletic Trainers Association and a member of the National Athletic Trainers Association since 1968. He received his certification in 1970. In 1973, he was elected vice-president of NATA District Ten and became District Director of District Ten in 1976.

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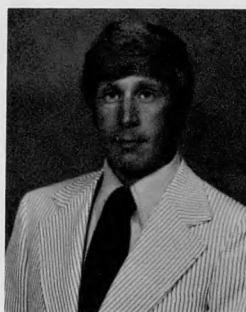
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# The Winner of the First Annual N.A.T.A. Student Writing Contest

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## Anterior Tibial Compartment Syndrome

By  
**LORI AMES GALSTAD**  
Student Athletic Trainer  
Student Physical Therapist  
University of Wisconsin-La Crosse

Following practice on Monday evening, a football player came into the training room complaining of pain over the lateral portion of his left shin. He had been hit in the shin during a game the previous Saturday, describing it then as a bruise. But following practice on Monday, the pain was more intense and unyielding. Upon examination, it was found that the anterolateral portion of his shin was discolored, very tender to palpation, and swollen (anthropometric measurement taken four inches below the patella was one inch greater on the affected side). The distal pulses were present, he had normal sensation of the foot and leg, and his muscle strength was normal. This author, knowing little more about anterior compartment syndrome than that it clinically presents itself on the anterolateral portion of the shin and that it is considered a true medical emergency, suggested that the athlete be sent to the emergency room and decided to find out more about the syndrome. Hopefully this information will be of some value in awareness and early recognition of anterior compartment syndrome. This paper will describe the anterior compartment anatomically, discuss some possible causes of the syndrome, summarize the evaluation of the athlete, briefly describe the treatment of the syndrome, and give some suggestions for the rehabilitation following an anterior compartment syndrome.

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*Lori Galstad has just completed her senior year at the University of Wisconsin-La Crosse, where she was a student athletic trainer for four years and majored in physical therapy. She has been a member of the National Athletic Trainers Association since 1976, and last year became a member of the American Physical Therapy Association. She also is a member of Sigma Zeta, an honorary science society and has been nominated to Who's Who in American Universities and Colleges.*

### Anatomy

The muscles of the anterior compartment include the tibialis anterior, the extensor hallucis longus, the extensor digitorum longus, and the peroneus tertius. These four muscles all share a common origin along the interosseus membrane; they also have origins from the anterior fibula, the lateral condyle and surface of the tibia, and the deep fascia. The tibialis anterior attaches medially on the foot thereby acting in dorsiflexing and supinating the foot. The extensor hallucis longus attaches into the base of the distal phalanx of the first toe so as to extend the proximal phalanx of it and also dorsiflex and supinate the foot. The extensor digitorum longus attaches and acts in a similar way as the extensor hallucis longus but going to the other four digits. The peroneus tertius inserts into the base of the fifth metatarsal and acts to dorsiflex and pronate the foot. (2, 9, 10) The chief blood supply of the anterior compartment is the anterior tibial artery, but branches of the posterior arteries also contribute. (2, 6, 9, 10, 17) The muscles of the anterior compartment are all innervated by the deep peroneal nerve, therefore, pressure on this nerve can cause loss of function of all four muscles of the anterior compartment. The sensory branch of this nerve supplies the dorsal surface of the first two toes and the first interdigital cleft. A lesion of, or compression on, the deep peroneal nerve results in foot drop and sensory loss on the dorsum of the first two toes. (2, 9, 10, 17) The contents of the anterior compartment are enclosed by very rigid osseous and fascial walls. The compartment is bordered anteriorly by the anterior intermuscular septum, posteriorly by the interosseus membrane, laterally by the lateral compartment fascia and the fibula, medially by the lateral portion of the tibia, superiorly by the superior tibiofibular joint and inferiorly by the extensor

retinaculum. (2, 9, 10, 14) Due to these extremely unyielding compartment walls and the major neurovascular supply, the compartment is quite susceptible to a compression syndrome. (17)

### Causes

Many theories have been presented regarding the cause of anterior compartment syndrome indication that it is not that well understood. Some of these causes include arterial insufficiencies or abnormalities, decreased venous and/or lymphatic outflow resulting in tissue fluid accumulation, direct trauma with or without a fracture, swelling of muscles in the compartment (especially if there is damage due to overuse), or local infection. (1, 2, 7, 8, 11, 14, 16, 17, 18, 19, 20, 21, 23, 24, 25, 26, 27, 31) In all of these cases, there is a build up of pressure in the compartment accompanied by decreased tissue perfusion. The rising pressure in the compartment affects the microcirculation of the musculature, therefore the tissue becomes ischemic and eventually necrosis results. Bradley (2) strongly suggested that there is an interrelationship between this increasing intercompartmental pressure and decreased tissue perfusion, and felt they form a vicious circle eventually resulting in tissue necrosis.

Direct trauma and overexertion are the causes of anterior compartment syndrome which the trainer must be most concerned about. In both of these cases, there will be an accumulation of fluid in the compartment due to the body's healing response. For some reason, (vascular obstruction due to the increased pressure, retention of fluid in the muscle, occlusion of outflow tract of lymphatics, or a combination of these) the volume will increase; and the pressure in the compartment will continue to rise due to the inextensibility of the compartment walls earlier described. (2, 7, 8, 14, 15, 16, 18, 19, 20, 21, 23, 24) It must be stressed that these are conditions that the trainer comes in contact with daily. For example, the unconditioned athlete overexerting in the first few days of practice or those athletes involved in collision and contact sports. Because of their susceptibility to this very serious problem, the trainer must be able to recognize a possible

anterior compartment syndrome early.

### Examination

The subjective examination of the athlete must include where, when, and for how long his/her symptoms have been present. The pain will be over the area of the anterior compartment, it will come on after activity, and may vary somewhat as to how long it lasts. (1, 2, 7, 8, 11, 13, 23, 24, 27, 29, 31) A chronic form of anterior compartment syndrome has been defined which must be recognized by the trainer as anterior compartment syndrome and not shin splints. (2, 13, 29) Unlike shin splints, where the pain is along the tibial attachment of the anterior muscles, the pain will be localized over the entire compartment, and it will not respond to shin splint treatment regimen. In the acute form, the pain will begin after exercise and keep increasing in intensity even when the athlete rests. As a guide, an outline of the subjective examination is supplied in Table 1 (5).

The objective examination must include a visual description of the involved area, active and passive range of motion measurements bilaterally, manual muscle tests and sensory assessment (also bilaterally), and evaluation of peripheral circulation. The trainer can suspect anterior compartment syndrome when there is tightness of the structures of the anterior compartment and if palpation brings on pain. (11) The examination may also show swelling and discoloration along with increased temperature of the anterior compartment, decreased active range of motion of the affected extensors in dorsiflexion, pain elicited on active and passive range of motion, decreased strength of dorsiflexion and toe extension, decreased sensation usually beginning in the first webbed space, and/or possible decreased peripheral pulse. (1, 2, 7, 8, 13, 14, 15, 16, 17, 18, 19, 20, 21, 24, 25, 27, 29, 31) Rorabeck and Macnab (24) felt the earliest and most reliable clinical sign is referred pain to the compartment on passive plantarflexion of the toes or ankle. Hoppenfeld (11) stated, "Normally, the structures of the anterior compartment should feel soft and yielding. If they are tight and intractable, and if palpation elicits tenderness, there

**Table 1**  
**Subjective Examination of Lower Leg**

<p><b>I. Patient Information</b></p> <p>A. Name</p> <p>B. Sport</p> <p>C. Date</p> <p><b>II. Location of Symptoms</b></p> <p>A. Right or Left</p> <p>B. Body Area (indicate on body chart — example included)</p> <p><b>III. History</b></p> <p>A. When did present bout start</p> <p>1. Suddenly</p> <p>a) Incident</p> <p>1) Mechanism of injury</p> <p>2) Activity</p> <p>b) No incident</p> <p>1) Woke with it</p> <p>2) Came on during day</p> <p>3) Unusual activity</p> <p>2. Gradual Onset</p> <p>a) From predisposing activities</p> <p>b) From incident</p> <p>B. Where did pain (referred and local) start</p> <p>C. Where did pain spread</p> <p>D. Was there a leveling off of symptoms</p> <p>E. Has athlete ever had this or similar problem before</p>	<p>1. Frequency</p> <p>2. Length of recovery</p> <p>3. Previous treatment</p> <p><b>IV. Behavior of Symptoms</b></p> <p>A. Constant</p> <p>1. Vary in intensity</p> <p>2. Affect of rest</p> <p>3. Does pain wake athlete in the night</p> <p>4. How is it in the morning</p> <p>5. Is there any stiffness</p> <p>B. Intermittent</p> <p>1. When</p> <p>2. What brings it on</p> <p>3. How long does it last</p> <p>4. What helps ease it</p> <p>5. How long can athlete be pain free</p> <p>6. Affect of rest</p> <p>7. Does pain wake athlete in the night</p> <p>8. How is it in the morning</p> <p>9. Is there any stiffness</p> <p><b>V. Special Questions</b></p> <p>Was disability immediate, Is it the result of swelling and edema, Was there an audible "snap" (indicating a fracture), Is there a feeling of "tightness", etc.</p>
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is evidence of an anterior compartment syndrome." The trainer must be aware of these characteristic signs so early recognition is made and the athlete is sent to a physician. The physician can then verify an anterior compartment syndrome by measuring the pressure within the compartment using a catheter. (18, 23) If the pressure exceeds a set standard, immediate fasciotomy is called for. Nerve conduction velocity tests as well as muscle action potential amplitude measurements may also be utilized by the physician. (15, 31) He/she will also rule out certain conditions which present themselves in a similar way to anterior compartment syndrome. (1, 2, 13, 29, 31) As a guide, an outline of the objective examination is shown in Table 2.(5)

### Treatment

The emergency care for an anterior compartment syndrome is ice; this would best be applied in the form of an ice cup to avoid pressure. Compression and elevation are contraindicated due to the already existing intracompartmental pressure and the ischemia of the tissues. A fasciotomy should be performed within twenty

four hours if return of muscle function is expected. (8, 13, 14, 28) In reviewing the literature, early decompression fasciotomy is always stressed. (1, 2, 7, 8, 13, 14, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 27, 28, 29, 30, 31) Fasciotomy is also indicated for the chronic form of anterior compartment syndrome if the pain is too limiting to the athlete's activities. The fasciotomy is usually performed by cutting two to three small incisions in the skin and one long incision in the fascia extending the length of the compartment. (20) The skin incision may be left open or closed (28), and drains may be placed in the compartment to allow drainage over the following couple post-operative days. (4) The length of the convalescence will vary according to the severity of the syndrome and the time of fasciotomy.

### Rehabilitation

Initiation of a rehabilitation program and approval to return to activity is governed by the physician's decision with the trainer closely monitoring the athlete's program and progress. Due to inactivity, weakness may be present throughout the entire extremity. Therefore, quadsetting

**Table 2**  
**Objective Examination of Lower Leg**

- |  |   |
|--|---|
| <p>I. Observation</p> <p>A. Gait</p> <p>B. Symmetry (bilateral comparison)</p> <p>1. Alignment</p> <p>a) Knee (varus, valgus, recurvatum, tibial torsion)</p> <p>b) Feet</p> <p>c) Hip</p> <p>d) Lumbar spine</p> <p>C. Deformity</p> <p>D. Signs of trauma</p> <p>1. Ecchymosis</p> <p>2. Abrasions</p> <p>3. Contusions</p> <p>E. Circulatory impairment</p> <p>F. Inspect shoes</p> <p>G. Inspect feet</p> <p>H. Anthropometric measurements</p> <p>1. Swelling</p> <p>a) Location</p> <p>b) Severity</p> <p>2. Atrophy</p> <p>II. Related or Referral Joints</p> <p>A. Knee</p> <p>(perform peripheral joint clearing test)</p> <p>B. Hip</p> <p>(perform peripheral joint clearing test)</p> <p>C. Lumbar spine</p> <p>(have athlete perform active movements and apply overpressure)</p> <p>III. Palpation</p> <p>A. Temperature</p> <p>B. Sensations</p> <p>C. Swelling</p> <p>D. Pain/tenderness</p> <p>E. Capsular thickening</p> <p>F. Peripheral pulses</p> <p>G. Clinically important points</p> <p>1. Anterior tibial compartment</p> <p>2. Distal tibio-fibular ligament</p> <p>3. Three lateral ligaments of ankle</p> <p>4. Distal tibia</p> | <p>5. Fifth metatarsal styloid process</p> <p>6. Achilles tendon</p> <p>7. Medial malleolus</p> <p>8. Fibular head</p> <p>9. Tarsals</p> <p>IV. Active Movements</p> <p>A. Gait</p> <p>B. Squat</p> <p>C. Range of motion (goniometric measurements of flexion, extension, inversion and eversion)</p> <p>D. Heel walking</p> <p>E. Toe walking</p> <p>F. Hopping</p> <p>G. Specific movements which aggravate</p> <p>H. Mechanism of injury</p> <p>V. Passive Movements</p> <p>A. Physiological movements</p> <p>1. Dorsiflexion</p> <p>2. Plantarflexion</p> <p>3. Inversion</p> <p>4. Eversion</p> <p>5. Capsular pattern (dependent on lengths of muscles in lower legs; plantar flexion more limited)</p> <p>6. End feels</p> <p>7. Painful arc</p> <p>B. Accessory movements</p> <p>1. Postero-anterior</p> <p>2. Antero-posterior</p> <p>3. Longitudinal</p> <p>4. Compression</p> <p>5. Rotation</p> <p>VI. Neurological Tests</p> <p>A. Sensation</p> <p>B. Achilles Tendon Reflex</p> <p>C. Resisted Movements (manual muscle tests)</p> <p>1. Dorsiflexors</p> <p>2. Plantarflexors</p> <p>3. Invertors</p> <p>4. Evertors</p> |
|--|---|

and straight leg raising are suggested for maintaining/restoring the strength to the quadriceps. Straight leg raises in the prone position can help regain strength to the hamstrings and gluteals.

The main thrust of the rehabilitation program must be directed to the muscles of the anterior compartment, however. Dorsiflexion of the ankle, extension of the toes, supination of the foot and eversion are actions that are of greatest importance. Both active and later resisted exercises in these movements are indicated. The following exercises are some that may be used to gain strength in these areas: isometric contractions in dorsiflexion, walking on heels, walking on lateral borders of the feet (just far enough over to get active supination, avoiding undue stretching of the lateral aspect of the ankle joint), isometric contractions of the toe extensors as well as evertors, toe tapping keeping ball of foot planted firmly on floor and trying to increase speed, foot arching, and, if available, a Cybex program concentrating on dorsiflexion, inversion and eversion. (3, 5, 12) Complete return of function and vascularity is necessary before the athlete can return to competition, and this is to be determined by the

physician. (12)

## Conclusion

The anterior tibial compartment syndrome has been explained by reviewing the anatomy of the anterior compartment, discussing some possible causes of the syndrome emphasizing those causes most often encountered by the athletic trainer, presenting characteristic signs and symptoms found on evaluation, describing the treatment of the syndrome, and listing some suggestions for the rehabilitation of the athlete. Awareness of the syndrome and early recognition of a possible anterior compartment syndrome has been stressed so referral to a physician can be made in order to facilitate early diagnosis. Promptness on both the trainer's and the physician's part is important. If surgical intervention is indicated, it must be performed within twenty four hours in order for the athlete to get return of muscle function. Anterior tibial compartment syndrome is a true medical emergency, and the athletic trainer must be aware of not only its existence but also how it clinically presents itself and the urgency of proper medical treatment.

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# Second Annual N.A.T.A. Student Writing Contest

In an effort to promote scholarship among young athletic trainers, the National Athletic Trainers Association is sponsoring an annual writing contest.

1. This contest is open to all undergraduate student members of the NATA.
2. Papers must be on a topic germane to the profession of athletic training and can be case reports, literature reviews, experimental reports, analysis of training room techniques, etc.
3. Entries must not have been published, nor be under consideration for publication by any journal.
4. The winning entry will receive a \$100.00 cash prize and be published in *Athletic Training* with recognition as the winning entry in the Annual Student Writing Contest. One or more other entries may be given honorable mention status.
5. Entries must be written in journal manuscript form and adhere to all regulations set forth in the "Guide to Contributors" section of this issue of *Athletic Training*. It is suggested that before starting students read: Knight KL: Writing articles for the journal. *Athletic Training* 13:196-198, 1978. NOTE: A reprint of this article, along with other helpful hints, can be obtained by writing to the Writing Contest Committee Chairman at the address below.
6. Entries must be received by March 1. Announcement of the winner will be made at the Annual Convention and Clinical Symposium in June.
7. The Writing Contest Committee reserves the right to make no awards if in their opinion none of the entries is of sufficient quality to merit recognition.
8. An original and two copies must be received at the following address by March 1, 1980.

**NATA Student Writing Contest**  
c/o Dr. Ken Knight  
Men's Physical Education  
Indiana State University  
Terre Haute, Indiana 47809

## A Tip from the Field:

# Airplane Insulation for Flying Feet

**DAN KULUND, M.D.**  
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University of Virginia

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Doctoral Candidate in Sportsmedicine  
University of Virginia

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Prosthetic and Orthotic Technician  
University of Virginia

Athletes are running faster and jumping higher. Their footwear is trying to keep up with their feet but is still behind, especially in the area of the insole. This is especially true with baseball spikes, football cleats and basketball shoes. Most insoles are a thin layer of rubber with a small arch cookie. These insoles do not conform to the runner's foot and often the "arch support" is made for everyone but fits no one and can cause blisters. Sometimes the cookie is entirely in the wrong place and makes the shoes unwearable. The concept of bringing the ground to the foot is only partially achieved, shock absorption is not complete and the foot is set up for calluses, plantar fasciitis and plantar fascia tears, heel bruises and excessive pronation.

Some athletes have put rigid orthoses in their shoes to cut down on pronation. Since the athlete is now pounding on a rigid plastic, the goal of putting a shock-absorbing surface between the foot and the ground is destroyed. The firm orthotic surface is separated from the foot only by the sweat sock. In addition, these orthoses cost a lot, pinch the foot and often need modifications. We are using airplane insulation (Plastazote®)\* inserts that are soft, durable and modifiable for the treatment of most foot problems. They reduce jarrings, prevent plantar fascia tears, diminish pronation, protect against heel bruises and reduce foot and leg fatigue.

Plastazote was first used as airplane insulation but has found application in medicine for treating insensitive

diabetic feet and bad calluses. The material is found in many training rooms for the protection of injured parts. It is a closed-cell nitrogen-blown polyethylene foam that is radiation-triggered to produce strong bonds and durability. It comes in varying durometers (firmness) and we use the firm, white kind. A sheet of the material is placed in an electric oven and it is heated until it is moldable (Fig. 1). The Plastazote becomes plastic at 140°. We keep our oven at 220-240° and the sheets become soft in five minutes. It is then allowed to cool so that it can be placed in contact with the foot. The athlete stands on the sheet while the trainer presses it up into the arch area (Fig. 2). The foot outline is traced (Fig. 3) and the shaped insert is then ready for trimming (Fig. 4). The trimming is done with a knife (Fig. 5) and the insert is smoothed on a grinder (Fig. 6) and inserted into the shoes. These inserts will fit into baseball spikes, football cleats and basketball shoes, the types of shoes where they are most needed. The foot and insert will not fit into some shallow training shoes, so the runner should have his inserts made and then try on various shoes to find a suitably fitting pair. The airplane insulation is washable and is lightweight for training and competition.

The inserts should be used in the everyday walking shoes as well as in training and competition shoes. Wedges of plastazote, felt or neoprene and heel raises and rearfoot and forefoot posts can be glued on using Barge® all-purpose shoe repair cement which is flexible and waterproof.\* The active athlete will wear down the ball of the foot and heel region but the arch will stay intact. The inserts provide total contact for the sole of the foot and the team physician or athletic trainer can easily and inexpensively modify these inserts to cushion the foot or alter the biomechanics for the benefit of the athlete.

\*Firm, White Plastazote® available from: Alimed, 138 Prince Street, Boston, Mass. 02113, (617) 227-0899

\*Barge® cement is available from: Pierce & Stevens Chemical Corp., Box 1092, Buffalo, New York 14240

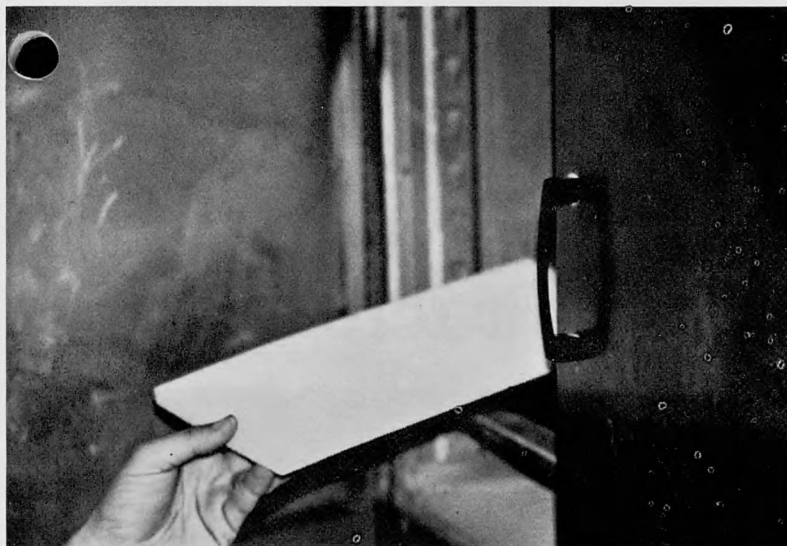
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*Dan Kulund is an Assistant Professor of Orthopaedic Surgery and Physical Education and Chief of the Foot Clinic at the University of Virginia in Charlottesville. He is a graduate of Hofstra College and George Washington University.*

*Tom Soos is a doctoral candidate in Sportsmedicine at the University of Virginia. He was a student trainer at Davidson and a graduate assistant at VMI.*

*Paul Van Noy received his BA in English from the University of Virginia and is a Prosthetic and Orthotic Technician and master of shoe modifications.*





**Figure 1.** The airplane insulation is heated so that it become workable.



**Figure 2.** The material is pressed under the arch as the athlete stands on it.



**Figure 3.** The outline of the athlete's foot is traced.



**Figure 4.** The shaped insert is now ready for trimming.



**Figure 5.** Trimming is accomplished using a knife.



**Figure 6.** The insert is smoothed and inserted into the shoes.

# The Use of RTV-11 Silicone Rubber For A Carpal Navicular Fracture

By  
Mark Doughtie A.T.,C.  
Head Athletic Trainer  
Tufts University  
Medford, MA 02155

It may be hard to believe that a material that was used in the Apollo Spacecraft to get man to the moon can also be used to get athletes on the court. I was introduced to this material, RTV-11\* silicone rubber, and its use in athletic training by a fellow trainer.<sup>1</sup>

I had used RTV-11 for the support and protection of sprained thumbs on many occasions, but my greatest success with it has been with a member of our basketball team who has had a history of carpal navicular fractures.

The history of injury includes a fracture of the navicular during his sophomore year which resulted in surgery to graft the fractured bone. During pre-season workouts, in this his junior year, the athlete fell injuring the same wrist. X-rays taken revealed a hairline fracture of the carpal navicular. Our team physician immobilized the fracture with a full arm cast for two (2) weeks, and a short arm cast for one (1) week. At this time, a decision was made to immobilize the wrist with a soft support made of RTV-11 silicone rubber, hopefully, allowing him to practice as well as compete. The support has provided

excellent support and has allowed the athlete to compete free of pain. Although the support is inspected prior to each contest by the game officials to ensure compliance to

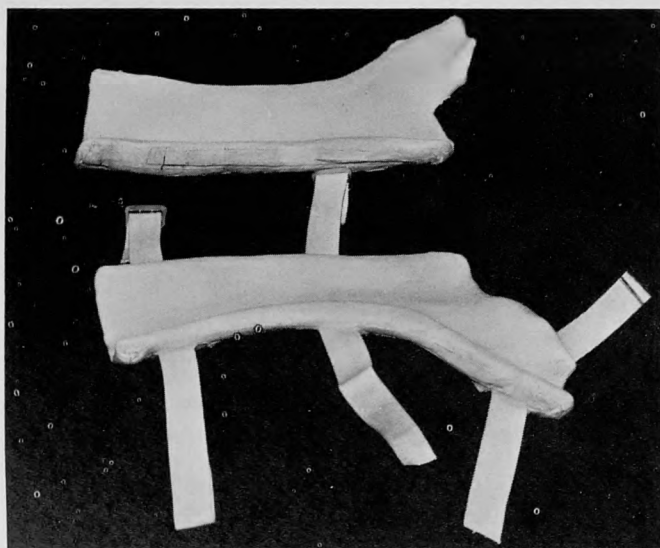


Photo 1. Plaster bi-valve cast

*Mark Doughtie, A.T.,C. is Head Athletic Trainer at Tufts University, Medford, Massachusetts.*



Photo 2. Bi-valve cast applied to hand and wrist.



Photo 3. Materials needed for application of RTV-11 soft support.

\*Made by General Electric at their silicone products department. (It may not be possible to purchase direct but most Resin type companies will have it.)



the rules, each official has declared the support safe for competition.

While the athlete is not on the basketball court taking part in practice or game competition, the injury is totally immobilized by the use of a plaster bi-valve cast (photos 1 and 2).

Nine (9) weeks after the fracture, x-ray films were taken to determine the status of the injury. At this time the films were negative, indicating the fracture had healed. I cannot say that the healing of the injury is a direct result of the RTV-11 soft support, however, I would like to think that this type of support offered the necessary immobilization to keep this athlete in the game rather than on the sideline. Although the fracture has healed, it is our intention to have this support worn for the remainder of the year to prevent further injury.

The materials needed for the support and the method of application are as follows:



Photo 4. Area of hand and wrist to be protected is wrapped with kling gauze.

#### Materials needed (photo 3)

Top Row: RTV-11 silicone rubber; curing agent included in kit or a faster curing type (Neo-Cure - 28); (I.C.) kling gauze; cup

Bottom Row: Bandage scissors; tongue blade; rubber glove (optional); Application

#### Step 1 (photo 4)

The area to be protected is wrapped with kling Gauze. The width of the gauze used depends on the size of the area to be covered.

#### Step 2 (photo 5)

RTV-11 compound is poured into a cup and the curing agent is added. (About 60 drops per ten ounces of com-



Photo 5. RTV-11 compound is poured into cup and curing agent added.

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pound) The more curing agent used the quicker the compound will harden.

**Step 3 (photo 6)**

The area wrapped with kling gauze is covered with a layer of RTV-11 compound.



**Photo 6.** Area covered with kling gauze is covered with layer of RTV-11.



**Photo 7.** RTV-11 compound is smoothed evenly over the gauze.



**Photo 8.** RTV-11 is smoothed evenly over the gauze for uniform thickness.

**Step 4 (photo 7 & 8)**

The compound is smoothed over the gauze for uniform thickness and support.

**Step 5 (Photo 9)**

A second layer of kling gauze is applied over the layer of RTV-11.

**Step 6**

This process of alternating kling gauze and RTV-11 compound is continued until the desired thickness and support are achieved. For wrists, 6-7 layers will work best but for thumbs, only 3-4 layers will be necessary. I have found that using gauze as the final layer provides a smoother finished product.

**Step 7**

When the support has hardened (does not feel sticky when touched) it can be removed with bandage scissors. It will normally take two hours to harden unless the faster drying neo-cure 28 is used. Three drops of this will cause hardening in just a few minutes.

**Summary**

The RTV-11 soft support offers excellent support and immobilization yet the finished product remains quite flexible (photo 10). The use of RTV-11 silicone rubber in athletic training, particularly in the treatment of hand and wrist injuries, may give us one more avenue to keeping our athletes in competition. After all, if we can put man on the moon, we should be able to put injured athletes on the court.



**Photo 9.** A second layer of kling gauze is applied over the RTV-11. This process of alternating gauze and RTV-11 is continued until desired thickness is achieved.



**Photo 10.** Although the support offers excellent support, it remains quite flexible.

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# Ankle Taping: Prevention of Injury or Waste of Time?

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Indiana University, Bloomington, Indiana

The practice of taping to prevent injuries to healthy ankles during athletic participation is an old one, dating back to the early days of collegiate football. Until recently, it was commonly accepted that this procedure was a valid method of preventing injury, although the statistical evidence to substantiate such a belief was difficult to find. Today, with the rapid rise in the athletic programs across the nation, athletic trainers are subjected to ever-increasing demands on both their time and budget to meet the safety needs of the athletes for which they are responsible. Consequently, for the sake of saving both time and money, today's trainer needs to know which practices are valid and which can be eliminated without sacrificing the athlete's health. They need to know if taping every ankle before every practice is really preventing injuries, or if it is simply a drain on the trainer's resources. Furthermore, the field of athletic training is becoming more interested in providing an objective evaluation for its practices, rather than perpetuating procedures that may be out of date and of little value.

The only way on conclusively answering the question of the validity of preventative ankle taping is through scientific research into the area. Numerous studies have been conducted to determine which taping or wrapping technique is more effective, and to measure the amount of

support provided by various taping methods. (1, 2, 3, 4, 5) The results of such experiments are beneficial to the trainers who have already decided that they will utilize a preventative strapping technique, but they do not directly answer the question of whether taping will, in fact, prevent ankle injury.

Other research includes surveys that were taken over one or more seasons that compare the ratio of injuries occurring to taped ankles with ankles that were not taped prior to participation. (6, 7) These studies appear to be more germane to the issue and could play a major role in influencing the decision of a sports medicine staff. However, such studies must utilize a sufficient number of subjects, report a sufficient number of injuries, and follow an accepted experimental design so as to make them both reliable and valid.

To achieve validity and reliability with a study on the benefits of preventative ankle taping, many obstacles must be overcome. Theoretically, all subjects involved in the experiment should have the same strength in their lower legs, should be subjected to the same type of stress during activity, should be taped by the same individual using the same technique, and so on. Needless to say, if an adequate number of subjects is to be utilized, these criteria cannot, realistically, be met. Consequently, before basing any decision on the results of research, the sports medicine staff must be aware of the experimental procedures used in the research, and must evaluate the results on the basis of these procedures.

Although preventative ankle taping is widely performed, it has met with opposition<sup>8</sup> from physicians and trainers who question the value of it, and from athletes who complain about the discomfort that taping may cause.

---

*Charles E. Emerick graduated from DePauw University, with a Bachelor of Arts in Psychology in 1972. After serving two years in the military, he attended Indiana University and received a Master of Science in Physical Education in 1976. He currently is employed as an Orthopedic Assistant at the Student Health Service, and as an Athletic Trainer for the Athletic Department.*

Ferguson (8) has been one of the most outspoken of these critics. He has denounced preventative taping for the following reasons: 1) the strapping invariably becomes loose during the early stages of activity, 2) the mobile nature of the skin sliding over the subcutaneous structures prevents rigid support; 3) the ability of the lower leg muscles to become stronger is diminished by the tape; and, 4) tape prohibits the subtalar joint from acting as a safety valve in preventing injuries to the ankles and knees. Each of the above four points will now be discussed in terms of the research and literature that has been done on the subject.

Ferguson's first two points deal with the amount and duration of external support provided by taping. One of the first experiments on this subject was conducted by Rarick et al (4) in 1962. Here, four methods of taping were measured for support provided to the ankle joint before and after a ten minute exercise period. The results indicated that all four methods of strapping gave substantial amounts of support throughout the entire range of motion of the ankle, with the combination of basketweave, heel locks, and stirrups being the most effective. However, after the exercise period, as much as 40 percent of the supporting strength of the strapping was lost. This loss was apparently caused by the tape slipping from its original place and from several of the strips being torn by the severe stress.

Malina et al (3) performed a similar experiment, except they measured the support of tape-on-skin as opposed to tape-over-stockinette. Data on force and range of motion were recorded as the subjects' ankles were turned into a position of plantarflexion/inversion. All subjects wore high top football shoes and were tested both before and after a standardized five minute workout period. Although all methods were demonstrated to provide significant support before the exercise period, the tape-on-skin strapping was found to be the most effective during both measurement periods. Once again, however, the strapings had slipped and torn during the activity, which seemed to account for the significant decrease in supporting strength found during the postexercise measurements.

The basketweave/heel lock applied to the skin was again demonstrated to retain a majority of its original strength in research conducted by Libera. (1) He randomly applied five taping treatments to ten football wide receivers and defensive backs who then participated in 110 minute practices. As much as 70 percent of the supporting strength of the adhesive strapings had remained even after the exercise bouts.

In a more recent study, Glick et al (5) used radiological techniques to analyze the role of an ankle strapping in preventing talar tilt, and found that tape held the talus in place for no more than 20 minutes of exercise. After this time period, the amount of talar tilt found in the six subjects was comparable to that found with no external support at all. (The type of strapping and whether the tape was applied directly to the skin was not specified in this study.)

The results of these investigations certainly indicate that taping to the skin will give the athlete a significant amount of initial support to the ankle joint. However, it has been repeatedly demonstrated that the effectiveness of such a strapping is markedly diminished (and in one case, notably absent) after a brief period of exercise. Consequently, critics of preventative taping appear to have a valid argument on the first two points made by Ferguson. Nonetheless, one question has remained unanswered: Even though the support has diminished, is the tape still providing enough protection to prevent injury to the joint? Injury surveys seem to indicate that taped ankles are, indeed, less susceptible to ligamentous injury.

Ryan (9) cited a study done by Hafner et al (7) during

the 1967 New York state high school football season. From the results of this survey, Ryan was able to conclude that the practice of preventative ankle taping (and wrapping) appeared to be significant in the prevention of ankle injuries.

Perhaps the most extensive research, that of Garrick and Requa (6), was conducted during the men's intramural basketball seasons of 1972 and 1973 at the University of Washington. The authors utilized over 2500 participants and examined the influence of high and low top shoes and the use of ankle taping and wrapping on ankle injuries. They found that subjects wearing high top shoes and tape on their ankles had a rate of injury significantly lower than any other combination of shoe and strapping technique. On the other hand, subjects wearing low top shoes without tape had the highest incidence of injury. This, concluded the authors, indicated that the use of high top shoes and an adhesive preventative strapping greatly reduces the likelihood of injury (and reinjury) to the ankle.

The findings of these two surveys, for the most part, demonstrated that the use of an adhesive strapping technique on the ankle can reduce the frequency of ligamentous injury to athletes, even though the supporting strength has greatly decreased. Nevertheless, before a definitive conclusion can be drawn, more extensive research must be carried out involving further comparison between the rate of injury to taped and untaped ankles. Complete records should be maintained which would include previous ankle injuries that may have occurred, and have, as a consequence, predisposed the athlete to further injury. As outlined earlier, however, procedural requirements for objective investigations have prevented extensive injury surveys from being conducted.

The third point made by Ferguson (and popular among other critics) is that taping the ankle prevents strengthening of the lower leg muscles. It is widely agreed upon that inversion sprains constitute the vast majority of ankle ligament injuries and that strengthening of the peroneus longus and brevis is one method to use in preventing and rehabilitating such sprains. Glick et al (5) demonstrated with electromyographical stop action movies that adhesive strapping had the effect of stimulating the peroneus brevis muscle for a longer period of time during the swing phase of gait. This suggested that taping may act to strengthen one of the muscles that is important in preventing inversion sprains.

The final area to be discussed involves the incidence of knee injury as related to ankle taping. Many physicians and athletic trainers feel that taping an ankle limits the motion of the joint, thereby placing an inordinate amount of stress on the knee joint and making it more easily injured. However, Wells (10) conducted a survey of 20 mid-western colleges and universities concerning this topic and concluded that ankle taping need not be discontinued solely for the purpose of avoiding knee injuries.

Wells did, though, go on to warn that if there is any possible predisposing cause of knee injury present in an athlete, then that individual should not have his/her ankles taped. This problem was also addressed by Garrick and Requa (6) who concluded that any increased likelihood of knee injuries is markedly overshadowed by the protection afforded the ankle joint.

The results of Hafner et al (7), also, would appear to indicate that ankle taping does not jeopardize the knee joint, as the authors found no significant differences between the percentage of serious knee injuries in taped, wrapped, and untaped football players.

The research listed above suggested that if an abnormal stress is placed upon the knee because of the application

*Continued on page 188*



# Medial Meniscectomy and Torn Anterior Cruciate Rehabilitation Program

## Introduction

As athletic trainers we are taught, and therefore, we teach that an injury must be handled as an individual situation. We realize that each injury has factors which occur to make it unique. The injury may depend on the playing surface, the activity involved, other competitors, safe equipment, facilities, and the condition of the athlete. With all of these in mind, the trainer evaluates the injury as being specific to that individual. Humans are admittedly unique and so are their injuries.

When it comes to rehabilitating the injured athlete, however, we many times employ a standardized program which may suit our time needs or that of the athlete. Isn't it just as important to individualize the rehabilitation program?

## Principles and Methods Used in Rehabilitation

Rehabilitation is based on the general principle of getting the injured body part reconditioned so that it will be equal to, or better than its opposite counterpart. To accomplish this, several methods are available to the doctor and trainer. Which one is best for you is a personal decision based on philosophy, and therein lies the individualized program.

Basic principles of familiar standard programs are used to help develop the individualized philosophy. A piece taken here and there and put together like a jigsaw puzzle will result in a completed piece of work that is ready to function as a single rehabilitation program. The pieces used in this case were the overload principle, high-intensity training, concentric and eccentric work, speed of movement, exercise through the full range of motion, endurance, and cross-education.

The overload principle is defined as meaning that hypertrophy and strength are brought about only by subjecting a muscle to greater loads than those to which it is accustomed. (3) The weight must be heavy enough to require a maximum intensity of contraction without pain to the injured area. High-intensity requires that a weight be taken through repetitive performances and carried to the point at which the muscle has a momentary failure or weakness. For this principle to exist, one needs to be able to lift the weight at least eight times and not more than 15. When the weight can be lifted 12-15 times, then more weight is added. (8) A maximum of 15 repetitions was used for each of the sets in this case. When the athlete could perform all of the sets with ease for several days, the amount of weight was increased.

By using the N-K Table for the beginning strength regime of the injured knee, we were able to make use of combining positive and negative work. In work done by Doss and Karpovich (4) and Komi and Buskirk (7) in com-

paring eccentric, concentric, and isometric training, they found that eccentric conditioning increased muscle strength on the average more than concentric conditioning. Komi and Buskirk (7) have suggested that maybe a better method to utilize both concentric and eccentric movements would be to start the conditioning program with the concentric movements first and then progressively add the eccentric contractions to the workout schedule. This may help avoid the soreness found in doing eccentric contractions as a main exercise program.

In O'Donoghue's book (8), Dr. Fred L. Allman, feels that the speed of the movement is part of the good form needed in order to benefit from the progressive resistive exercises. If the injured athlete takes 2-3 seconds in raising the weight, then 4-5 seconds should be taken in order to lower the weight. Baer and his associates (8) contend that strength improvement can be explained through the "tension developed by the muscle during exercise. It has been found that in isotonic exercises, the greatest tension is developed at a slower rather than faster rate of contraction, thereby establishing a condition which is conducive to greater improvements in muscular strength." The weight should be moved in a smooth and controlled fashion and briefly stopped in the position of full muscular contraction. In our program we used a seven second count. Basically there were three counts for the raising of the weight, one count to hold the weight, and three more counts to bring the weight to its beginning position.

Dr. Allman (8) feels that prevention of injury is most likely when the muscles have been strengthened in every position and over a full range of possible movement. The athlete, therefore, used the full range of motion concept during the rehabilitation program. Endurance of the muscles was accomplished, after minimal strength gains had been achieved, by using a low resistance and high repetition factor. Use of an Orthotron\* helped facilitate this procedure. The dial was set at 10, the fastest speed, and the athlete was asked to see how many extension-flexions could be done in a set amount of time. The length of time started at 45 seconds with the athlete only doing 32 repetitions. The time was increased in 15 second intervals when the athlete was able to do one extension-flexion per second plus 15 repetitions (example: in 45 seconds the athlete would have to do 60 repetitions before changing the length of time.) When 90 seconds and 110 repetitions were reached, the program was switched. It then went back to 45 seconds and the speed was decreased by one number on the dial. This athlete eventually progressed to a setting of seven up and seven down and a time of 60 seconds achieving 78 repetitions on the injured leg and 82 repetitions on the uninjured leg. After this, a change was made to the recommended Orthotron endurance program. This consisted of setting the setting at seven up and seven down. She was to continue the extension-flexions until she could no longer do 50% of the maximum registered on the dial. The number of repetitions achieved was then recorded.

The last point to discuss is cross-education. Hodgkins (5) discusses it in her work by stating that, although, there was no attempt to determine the physiological cause

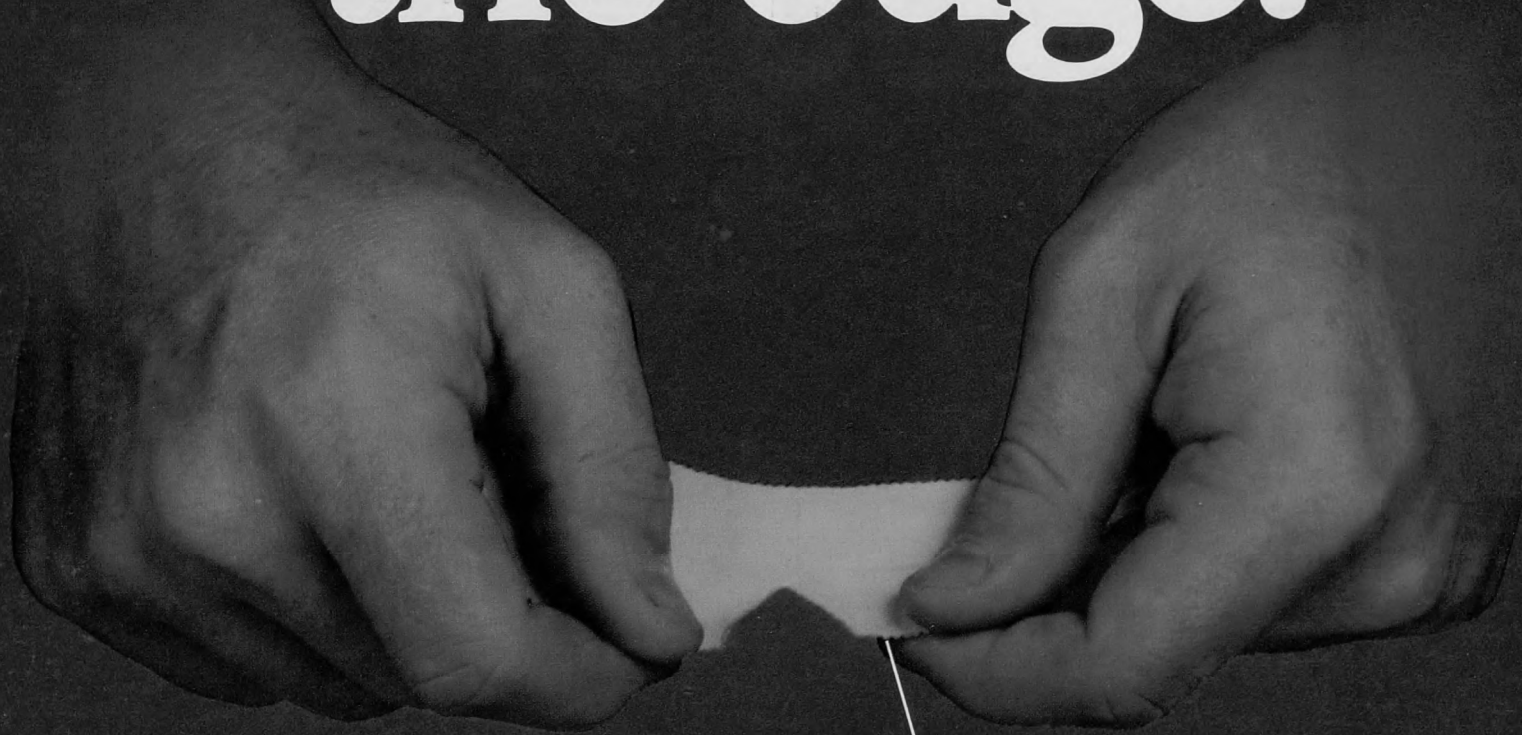
*Continued on page 154*

Nancy Stevens received her BA degree from Iowa Wesleyan College, Mount Pleasant, Iowa in 1967. She taught physical education in the Columbus Community School District, Columbus Junction, Iowa for nine years before going back to school in 1976 and receiving her master's degree from Indiana University in May, 1978. NATA Certification was achieved in October, 1978. She is now the women's athletic trainer at the University of Arkansas, Fayetteville, Arkansas.



\*Lumex, Inc., Bay Shore, N.Y.

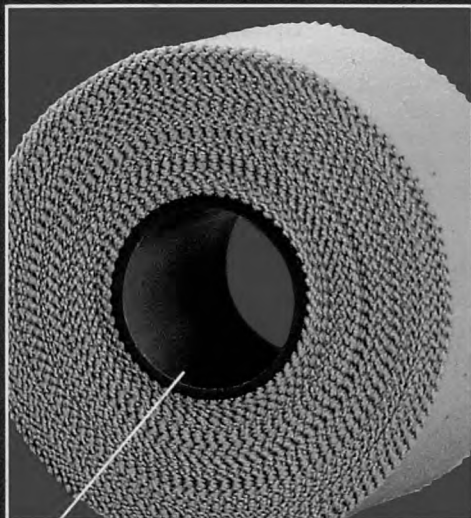
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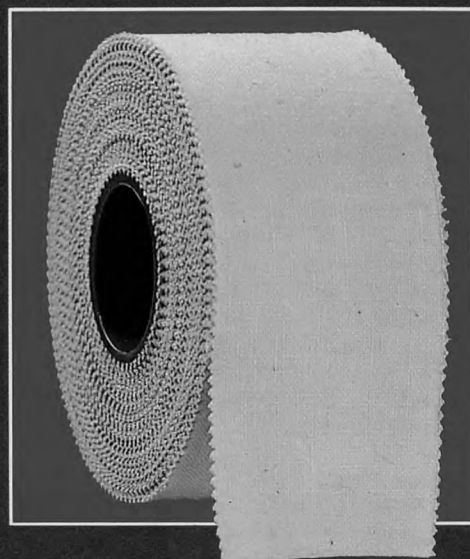
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of endurance increases, it seemed highly probable that cross-education was involved. In our case, strength was worked on in only the injured leg, but as the circumference measurements (6) were taken and recorded and the maximum single lift capacity was used as a test, improvement was seen in both legs. Everything else being equal, cross-education appeared to be the answer.

Cailliet (2) states that with a post operative rehabilitation program for a meniscectomy, the normal use is within 10 weeks. In our case the physician gave permission to the athlete for normal usage and competition on January 18th after having surgery on December 15th for the removal of the medial meniscus and noting that a torn anterior cruciate existed. But to insure proper cardiovascular endurance, this athlete was not allowed complete participation until February 2nd, just seven weeks after surgery.

### Case Study

The case in point is that of an 18 year old female, basketball player who initially injured her knee on August 23rd in a pick-up basketball game. Upon seeing the physician on September 8, a quadriceps strengthening program was established. The program consisted of using the N-K Table for quadriceps and hamstrings strengthening and the Orthotron for endurance. The amount of weight used was established by trying to find a weight which could be used to give resistance, but yet be pain free throughout the range of motion. She began with 15 pounds for flexion and 20 pounds for extension. She then worked the weights up to 30 pounds for flexion and 35 pounds for extension before reinjuring the knee on November 11. The re-injury required the use of crutches and Zimmer splint for immobilization for several days. The team orthopedic surgeon performed an arthrogram which showed a medial meniscus tear, and surgery was scheduled for December 15th, one month away. The surgeon wanted the quadriceps and hamstrings to be as strong as possible before surgery. The N-K Table was used again for the pre-surgery strengthening of the knee. However, because of the re-injury and the return of pain on the range of motion, the weights were dropped to four pounds for the hamstrings and 11 1/4 pounds for the quadriceps. Five days before surgery, December 10th, she had reached a working weight of 15 pounds for the hamstrings and 30 pounds for the quadriceps.

Prior to going into surgery the trainers sat down with the athlete and explained what was expected of her after surgery. She was to have complete range of motion by the time she returned to campus for the beginning of the second semester. She returned on January 7th and came into the training room. In a diary kept by the athlete, she notes that her cast was on for three days and her knee was in an immobilizer for 2 days. Her range of motion was complete on January 1st, just a little over two weeks after surgery.

On the day after surgery, she began quadriceps setting exercises and straight leg raises. Quadriceps setting involved sitting with the legs extended and contracting the quadriceps and holding the contraction for eight seconds and then relaxing the muscles for two seconds. This was done in the beginning for three minutes three times a day and was increased to five minutes five times a day. Straight leg raises, in which the leg is held in extension and lifted while in this position, were done from a supine, prone, and side position. 100 of these from each position were done three times a day.

Step-ups (1) which were used throughout the rehabilitation program were begun at home on December 23rd. They consist of using the injured leg and a step. The step should be of varying heights as the program progresses. It started with a 4 1/2 inch height and

progressed to six inches on December 29th. At no time should the injured knee be required to form an angle of less than 90 degrees when the foot is placed on the step. The starting position consists of placing the injured side next to the step and bending the injured knee and placing that foot upon the step. Now, all of the body weight is transferred to the injured leg and lifted up to the step so that both feet are at the step level. To get back down, the uninjured leg is lowered to the floor. In order to prevent the uninjured leg from assisting the injured leg in the lifting and lowering of the body weight, encourage the athlete to have the heel of the uninjured foot to be the last thing to leave the floor and the first thing to touch the floor when coming back down. These should be done for two minutes to begin with and working up to five minutes at least three times a day. The length of time done per day can and should be varied according to the athlete and the injury.

The surgical process resulted in the removal of the medial meniscus and the notation of the complete tear of the anterior cruciate. The anterior cruciate was left as it was found. This type of surgery was not unusual, but we feel the recovery rate was.

Upon her return to campus, the circumference of both legs was measured in order to detect the existence of the injury and in order to determine when the injured leg was becoming equal in size to the uninjured (6). The measurements were done by the same person who used the same measurement point each time. The quadriceps measurements were taken six inches above the superior portion of the patella. The following is a chart of the measurements taken and the dates they were taken.

Date	Right Quad	Left Quad (injured)
9/29	21 1/4	21 1/4
12/15 — surgery		
1/5	18	17 1/2
1/11	19	18 1/4
1/13	19 5/8	19 1/4
1/24	20 1/8	20

On 2/2, she was allowed to have complete basketball practice without restrictions for the first time.

Strength measurements were taken by doing a single lift capacity (SLC) test for each leg. SLC makes use of the N-K Table. The athlete must take the weight through the entire range of motion and hold it for a one second count. When the full ROM cannot be achieved or when the weight cannot be held, the previous weight is considered the greatest amount one can lift and is recorded as the SLC. The following chart shows the results of these tests.

Date	Right Extension	Left Extension	Right Flexion	Left Flexion
9/29	30 lbs.	25 lbs.	25 lbs.	20 lbs.
1/5	50 lbs.	20 lbs.	40 lbs.	15 lbs.
3/16	95 + lbs.	95 + lbs.	87 1/3 lbs.	95 + lbs.

With a starting point determined by pain and the single lift capacity, the female athlete began a strength program with the N-K Table. Her first day of rehabilitation with weight occurred 23 days after surgery. It began with one set of 15 repetitions at 10 pounds and one set of 15 repetitions at 15 pounds for the quadriceps. For the hamstrings, she began with one set of 15 repetitions at 10 pounds, and one set of 15 repetitions at 12 1/2 pounds. The date was January 7th.

By January 13th, her workload had increased to two sets of 15 repetitions at 25 pounds and two sets of 15 repetitions at 30 pounds for the quadriceps. The hamstrings were being worked with two sets of 15 repetitions at 20 pounds and one set of 15 repetitions at 22 1/2 pounds and 25 pounds.

On January 18th, the physician gave her permission to



go full activity, which included running stairs, doing figure-8 runs, carioca run, jumping rope, and any other activity to build up her cardio-vascular endurance.

Before being allowed to compete again, activities were set up to allow her to feel the slippage caused by the missing anterior cruciate ligament. She ran individual drills which made her do sharp cuts at various angles and speeds. She did much work on sudden stops, pivots, shuffling, running backwards, and vertical jumping. She was made aware of how the slippage would feel. She also brought up the point that she was apprehensive about shooting a lay-up. It was while shooting a lay-up that the last injury before surgery occurred. This along with physical aspect of the injury were dealt with during rehabilitation.

On February 2nd, the day she was allowed to begin practice, her workload for rehabilitation was 15 repetitions at 35, 40, 45, and 50 pounds for the quadriceps; and 15 repetitions at 40, 45, 50, and 55 pounds for the hamstrings. Her maximum workload was reached on March 7th when she was lifting 70 pounds on extensions and 65 pounds on flexion.

Because the hamstrings primary function is to prevent forward displacement of the tibia on the femur (similar to the primary function of the now missing anterior cruciate) (8), the hamstrings were allowed to become stronger than the 1:2 ratio generally suggested for hamstrings to quadriceps ratio (6). At no time did we allow the amount of weight for flexion to surpass the amount of weight used for extension by more than five pounds.

After the basketball season, she stayed on a maintenance program consisting of rehabilitation three times a week. She was also a member of the Women's Track and Field Club that Spring and competed in middle distances and relay work.

#### Conclusion

The use of basic principles of rehabilitation were applied with a variety of methods in order to achieve a goal. Because of the individualizing of the rehabilitation program and the commitment of the athlete to improve as fast as possible, this particular program was a success. The athlete was ready and able to compete in the last four games of the season.

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# Can Your Athletes Really See?

By  
A.I. GARNER, O.D.

No less than in art, poetry and love, the human eyes are revered in athletics. A pedestal is accorded the quarterback who can pick out the open receiver downfield, the batter who draws a walk with the bases loaded, and the tennis player who watches his opponent's forehand stroke hit just beyond the baseline.

A random examination of athletic instruction books leaves no doubt that the importance of the eyes is widely appreciated. Handball players are advised that "following the flight of the ball is very important." (1) Tennis pros emphasize that "it is very important to discipline yourself to watch the ball." (2) Connie Mack once urged all baseball hitters with faulty vision to wear eyeglasses because "all great batters must have excellent eyesight." (3)

Indeed, Webster's very definition of an athlete is "one who is skilled in acts and feats of physical strength and agility, blessed with two good arms, legs, *eyes*. . . (emphasis supplied)."

Of course, the role of the eyes in the *success* of an athlete is only part of the story — and the less important part. The other half, and for the athletic trainer the most important half, is what the eyes have to do with the *safety* of the athlete.

Faulty vision is a clear threat to the batter waiting for an inside fastball, the tennis player advancing to the net and the football player sprinting to cover the kickoff.

Does it follow then, that the American athlete's vision is being carefully checked, protected and improved? Sadly, the author's research leads inescapably to the conclusion that it is not. The visual fitness of the American athlete, it seems, is being tragically ignored.

The author's research over the past six years indicates that one in every four American athletes has poor vision. The initial studies involved the screening of 3,084 high school and collegiate athletes. Of this number, 886 (28 per cent) could not pass the vision test used by the Pennsylvania State Police to determine if drivers should wear corrective lenses.

These screenings were conducted by the author between 1970 and 1975. All were performed with the Bausch & Lomb Ortho-Rater, and the criterion for passage was 20/40 vision in the better eye. The findings:

- 33 per cent wore prescription lenses.
- 22 per cent wore eyeglasses.
- 11 per cent wore contact lenses.
- 30 per cent had not had a previous eye examination
- 28 per cent failed the vision screening test.
- 22 per cent of those who wore prescription lenses (eyeglasses or contact lenses) failed.
- 62 per cent of those *not* wearing prescription lenses failed.
- 27 per cent of the high school football players failed.
- 33 per cent of the college football players failed.

The root finding — that one in every four athletes had a vision problem — corresponds to conclusions about the American youth in general drawn by the National Center for Health Statistics. (4) Other studies confirm that the incidence of vision problems among young people is far more prevalent than is generally recognized. (5)

A follow-up study by the author among 465 high school athletes tested during August and September of 1978 found an identical 28 per cent failure rate.

This data suggests persuasively that many American athletes are visual cripples. Many of them need corrective lenses, but there are others who have corrective lenses that they remove whenever they enter the gymnasium or the field of play. How much better they would perform if they were able to see as well on the field as off! And how much safer they would be!

Modern life makes today's young athlete even more susceptible to vision problems than his predecessors. Television viewing is a recognized hazard, and many games are played at night in the past were exclusively reserved for daylight hours.

Unlike the conditioning of muscle and mind, workouts and training do not help to compensate for or alter the athlete's visual fitness.

And what of the athlete who might be visually fit early in the game, but tires as the game progresses? As one's eyesight tires, so does the rest of the body. Competence suffers, and the risk of injury increases in a fatigued athlete.

The two principal problems uncovered by the screening are myopia, or near-sightedness, which is the inability to see distant objects well; and hyperopia, or far-sightedness which is the inability to distinguish close objects well.

Not long ago at a central Pennsylvania high school, a halfback consistently dropped passes that he should have



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caught. The alert team trainer recalled seeing the player wear spectacles in the classroom. A visit to an optometrist detected moderate myopia. He was fitted with sports glasses, and in his first game after that he caught six passes without dropping any. His improvement was so dramatic that he was named to the all-state team and went to Purdue University on a football scholarship.

During his junior year, a tight-end for Ohio State University complained of a definite strain when he removed his glasses to play. He suffered mildly from hyperopia and astigmatism. He said that as the game progressed, he became tense and tired, and by the end of the game he wanted desperately to wear his glasses again. Putting them on, he said, felt like "a cold compress on my aching eyeballs."

He said that during the season he missed at least six passes that he should have caught because of the strain. Hard contact lenses were prescribed for him, and he played his senior year at Ohio State free of visual discomfort and fatigue. That winter he was the first tight end chosen in the National Football League draft.

What is the trainer's role in improving and promoting visual fitness? Here are guidelines:

1. Athletes that squint to see clearly at distance, or who might have difficulty seeing the ball, could have a vision problem in one or both eyes.

2. Athletes who are constantly rubbing their eyes, or who suffer from headaches and excessive tearing, could have visual fatigue (eye strain) that could tire their body and impair physical ability. This, in turn, would make them more injury-prone.

3. Athletes who wear glasses regularly off the playing field should wear athletic glasses or contact lenses when playing football. Metal frames should not be worn for sports activities.

4. An athlete wearing spectacles must have their lenses made impact resistant to prevent lens breakage and

resulting eye damage. Plastic lenses are preferable.

5. Glass lenses will "fog up" during a game, especially when there is excessive perspiration. This can be prevented by cleaning the glasses with a steam-preventing, anti-static product.

6. Players wearing contact lenses could have either a spare pair or their regular glasses available in the event they lose one of their lenses during the game.

7. If the contact lenses become uncomfortable or smeared during the game, or if one of them drops from the eye, they should be cleaned with a proper solution before being reinserted.

8. Remember that an athlete having difficulty seeing during daylight hours would have an even worse problem at night.

In conclusion, trainers should see to it that if an athlete needs vision care, they get it. If they have corrective lenses, they should wear them. Better vision will produce better, safe athletes.

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# A Short Term Comparison of Two Different Methods of Resistance Training on Leg Strength and Power

By  
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## Introduction

Resistance training is widely used in rehabilitation, general physical fitness programs, body building, and as an integral part of training for a wide variety of sports.

In recent years a number of new ideas for strength training have been promoted amidst claims of superiority over all other forms of resistance training. Most of these ideas have been accompanied by a gadget or machine. Few of the claims made by the manufacturers of these machines have been investigated objectively.

One group of machines collectively known as Nautilus\* is widely used. Its promoters claim that it is scientifically designed (12) and superior to all other forms of resistance training (1, 12). The rationale behind Nautilus is that of varying resistance. Because of the cambered pulley wheel, the resistance of the machine varies to fit the force output curve of the muscle level system of the trainee. However, only four studies concerning Nautilus appear in the literature (4, 17, 18, 19) and only two of these studies (4, 18) compare Nautilus training to an alternate form of training, using a Universal Gym.\*\* Both studies found the Nautilus and Universal Gym systems of training to be equal in their ability to elicit physiological changes.

The purpose of this study was to investigate and compare the effects of short term Nautilus training with free weight training on the performance variables of leg strength and power.

## Procedure

The subjects were 34 healthy males enrolled in two beginning weight training courses at Louisiana State University during the Fall Semester of 1977. The subjects were trained identically for 4 weeks using a combination of Nautilus and free weights. At the end of 4 weeks training (T<sup>1</sup>), the following leg strength variables (1 RM) were measured; the squat (bottom of the thigh had to

\*Nautilus Sports/Medical Industries, Deland, Florida.

\*\*Universal Gym Equipment, Irvine, California.

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break parallel with the floor) and Nautilus leg press (NLP). Sufficient rest was given to each subject between the two exercises to insure a maximum effort. One or more of the experimenters were present during the strength measurements to insure that proper technique was maintained.

Power was estimated using the vertical jump (VJ) and the Lewis formula for power  $-\sqrt{4.9 \times \text{Body Wt. in KG}}$

FIGURE 1  
Protocol Utilized for Free Weight Group  
and Nautilus Group

## FREE WEIGHTS

### Monday

1. Push Jerks  
1X6 - light  
1X3 - intermediate  
1X3 - moderate  
1X3 - heavy
2. Squats  
1X6 - light  
1X3 - moderate  
3X3 - heavy  
1X6 - moderate
3. Bench Press  
1X6 - light  
1X6 - moderate  
3X6 - heavy
4. Behind Neck Press  
3X6 - heavy
5. Pullups  
3X6 - body weight

### Wednesday & Friday

1. Clean Pulls from mid thigh  
1X10 - light  
1X10 - moderate  
1X10 - heavy
2. Clean Pulls from floor  
1X6 - light  
1X6 - moderate  
5X6 - heavy
3. 1/4 Squats in Power Rack  
5X10 - heavy
4. Situps  
3X12

## NAUTILUS

### Monday-Wednesday-Friday

1. Hip & Back machine (2)
2. Leg Press (15)
3. Leg Extensions (15)
4. Leg Curls (15)
5. Double Shoulder  
Flies (12)  
Press (12)
6. Torso  
Pullover (12)  
Pulldown (12)

The numbers in parentheses represent the target repetitions at which muscular exhaustion should occur when the weights are properly adjusted.

FIGURE 2  
Adjusted Variable Means and Standard  
Errors at T<sub>2</sub>

	Bwt (Kg)	Squat (Kg)	NLP (Kg)	VJ (cm)	Power (Kg-m/sec)
Nautilus	N = 14	N = 16	N = 16	N = 16	N = 14
	80.3 + 0.5	106.4 + 1.8	107.1 + 2.9	51.3 + 0.7	90.5 + 1.7
Free Weight	N = 18	N = 18	N = 17	N = 18	N = 18
	80.2 + 0.5	120.0 + 1.7*	102.6 + 2.9	53.8 + 0.7*	95.4 + 1.5

\* — significantly different from Nautilus group 0.05



X VJ (M) (16). After a brief warmup and two practice jumps, each subject was given three trials for the VJ and the best score was used for data analysis. The VJ was performed the day before measuring the squat or NLP. In addition, body weight was measured using a medical scale.

After the initial 4 weeks training, subjects in each weight training class were randomly assigned to either a Nautilus or free weight group. The Nautilus group trained 3 days/wk (MWF) for 5 weeks according to the principles described by Jones (11, 12) with a negative accentuated workout on Wednesdays. Negative accentuated refers to doing the positive work with both limbs and the negative work with one limb. The limb doing the negative work was alternated with each repetition. The free weight group trained the same days according to the protocol shown in Figure 1. All movements in the free weight training protocol were done with the greatest possible velocity. Each group progressed at their own rate. Strength and Power increases were measured after 5 weeks ( $T^2$ ), in the same order as measured during the first testing period ( $T^1$ ).

### Statistical Analysis

Between group comparisons were made with Analysis of Covariance (ANCOVA) using  $T^1$  as the covariant and  $T^2$  as the dependent variable. Correlations at  $T^2$  were calculated using the Pearson Product Moment method, with the alpha level set at .05. Multivariate analysis was not used even though many of the variables were correlated. In many cases the high correlation is due to the use of two variables being used to estimate a third, as in power estimates where VJ and BW are used to predict power. The use of multivariate analysis here would lead to multi-collinearity (22).

### Results

The results of the strength and power measures are shown in Figure 2. The squat demonstrated the only significant strength difference between groups  $F^{1,31} = 12.78$ ,  $P = 0.001$ . The results of the VJ show that the free weight group increased significantly more ( $F^{1,31} = 5.20$ ,  $P = 0.03$ ) when compared to the Nautilus group. There was no significant difference between groups in power; although near significance was obtained  $F^{1,22} = 3.59$ ,  $P = 0.069$ .

Figure 3 shows the results of the Pearson Product moment correlations among the groups at  $T^2$ .

### Discussion

In designing this study there were considerations that the authors felt were very important in terms of athletic training programs. Therefore the 5 week training

program was used for the following reasons: 1) Many supervised off-season weight training programs are exceptionally short, only lasting 4 or 5 weeks. This is especially true of football programs. Therefore, the authors chose a training period of 5 weeks during which the subjects were assigned either to the Nautilus or free weight groups. 2) Furthermore, subjects having had experience training with Nautilus, free weights, or both, could influence the outcome of the study. An initial training period of 4 weeks was chosen to familiarize all subjects with the correct movements of each program.

It is surprising to find that the only strength difference measured was the squat. One might have expected the Nautilus group to perform better on Nautilus lifts and vice versa. (Figure 2) The significant difference favoring the free weight group, may have been due, in part, to specificity of training (8, 10) and the ability to move up in small increments (5-10-15 lbs., etc.) during training; the NLP increments are set at 25 lbs. An alternate explanation of this difference may lie in the mechanics of the Nautilus machine. Trainees have different limb lengths which create different moment arms. Because of this, the Nautilus machine's resistance is not likely to vary according to each individual's muscle lever-system's force output curve (10). Also, a muscle's ability to produce force is reduced as it shortens (8, 10). During work with free weights, the bone lever system compensates for this limiting factor (10). Varying resistance machines, such as Nautilus, may increase resistance at the point during the range of motion where this limiting factor occurs, thus reducing the ability of the bone lever system to compensate. Furthermore, under heavy work loads (repeated movements), fatigue of the muscle is more likely to occur nearer the completion of a contraction than at the beginning (10). If increased resistance because of a decreased mechanical advantage induced by the Nautilus machine occurs as fatigue begins to limit movement, work output may be reduced. Because of the above factors, progression (sustained overload) may be impeded, thus reducing the training effect.

The results of the VJ show that the free weight group increased significantly more when compared to the Nautilus group (Figure 2). This difference is possibly due to specificity of training. The specificity of training concept is made up of various components including specificity of velocity (8, 10, 20). Slow movements may be neurologically different from fast movements, even when they are mechanically the same. This neurological difference may include firing patterns, and number and types of muscle fibers activated (6, 8.) The Nautilus training system of slow movements (12) may have contributed to the differences between groups. Second, and

**FIGURE 3**  
Correlations Among Variables at  $T^2$

	Bwt		Squat		NLP		VJ		Power	
	N	FW	N	FW	N	FW	N	FW	N	FW
Bwt	1.00	1.00								
Squat	.50	.62*	1.00	1.00						
NLP	.23	.29	.78*	.85*	1.00	1.00				
VJ	-.43	-.03	.27	.49*	.05	.68*	1.00	1.00		
Power	.46	.64*	.63*	.79*	.18	.70*	.60*	.74*	1.00	1.00

N = Nautilus

FW = Free Weights

\* = Significant difference at  $p = 0.05$

perhaps most important, several of the free weight exercises, the squat,  $\frac{1}{4}$  squat, and clean pulls are mechanically similar to the VJ (9, 10). This mechanical mimicry may enhance the firing patterns of motor neurons used in vertical jumping as well as strengthen the muscle fibers involved (2, 3, 9, 20, 23).

The vertical jump had significant correlations with the squat ( $r = .49$ ), NLP ( $r = .68$ ), and power ( $r = .74$ ) within the free weight group. Within the Nautilus group only power had a significant correlation with the VJ ( $r = .60$ ). Power can be expected to have a significant correlation with the VJ because VJ height is used in the power prediction formula. The significant correlations (within the free weight group) of VJ with the squat and NLP strengthens the contention that training with free weights is the better method of increasing VJ performance.

There was no significant difference between groups in power (Figure 2). Perhaps with a large N or a longer training period the free weight group would have increased significantly more in power than the Nautilus group. Consequently, it is suggested that training programs for athletics should be of longer durations.

Costill, Miller, Myers and Hoffman (5) found a significant relationship between the squat and power measured by stair climbing. Stone, Smith, Ward, and Carter (21) have shown significant correlations between power using the VJ and Lewis formula and the snatch and clean among olympic weightlifters. In the present experiment, the relationship of the squat to power showed that 39.7% of the variance was accounted for in the Nautilus group, but 62.4% of the variance was accounted

for in the free weight group. Only the free weight group power measure had a significant correlation with the NLP ( $r = .70$ ). Power may be the most important component in most athletic endeavors (15, 24). Because of the stronger relationships of leg strength to power within the free weight group, changes in power and perhaps athletic success may be more likely to occur using free weights than Nautilus training.

Body weight did not change significantly (Figure 2). However, changes in lean body mass may have influenced the outcome and should be investigated in future studies.

Finally, one must consider the relative amounts of work each group performed. Direct comparisons of work between the free weight and Nautilus groups would be extremely difficult because of the Nautilus cambered pulley wheel. However, representatives of Nautilus have stated on several occasions that one set (8-20 reps) of an exercise to exhaustion is superior to multiple sets and repetitions in producing strength gains (7, 13, 14). Therefore, differences in work may have contributed to the changes observed since the free weight group used multiple sets. In any case, there is a difference in results between the two methods used in this study, favoring the free weight group.

### Summary

Free weight training, according to the protocol given in Figure 1, was superior in producing significant changes in the squat and VJ. This study indicates that free weight training is superior to Nautilus in producing changes in variables which may influence athletic success during short term training.

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# Goniometry: A Review of the Literature

By GARY F. LUSIN, M.S., A.T.C.; RICHARD L. GAJDOSIK, M.S., L.P.T.; and KATHLEEN E. MILLER, Ph.D.

Goniometry is defined as the use of instruments for measuring range of motion in the joints of the body. To anyone who works with individuals requiring physical rehabilitation, goniometry is extremely important. It was used extensively during World War I and World War II to provide valuable information to physicians and therapists concerning patient progress regarding range of motion of injured joints and related structures. Since that time accurate assessment of joint range of motion has become a more integral part of the evaluation process in most areas of physical rehabilitation, including athletics. It is a valuable tool used to identify limitations and document improvement following a specific course of treatment.

In recent years interest has expanded regarding joint function and attempts are being made to measure specific joint ranges of motion. This has resulted in the increasingly frequent use of goniometry in the clinic and also the need for more accurate documentation of patient evaluations and improvement, including preseason examinations of flexibility. Few of the instruments and techniques available today, however, have been determined to be reliable measures of joint motion because the measurements obtained do not express precise, objective data.

This paper will present a review of the related literature and focus on questions pertaining to the reliable use of goniometry. It is hoped that the reader will gain a better understanding of goniometry and become aware of the additional research necessary to establish more accurate and reliable procedures for its use.

Extensive reviews of goniometry were conducted in 1939 by Weichec and Krusen (19) and in 1949 by Moore (8, 13, 14). Each investigation consisted of a review of the literature which investigated measurement techniques and critically analyzed goniometry to determine if it provided accurate and reliable information. Moore concluded that certain factors remain as questionable variables in producing accurate measurements, including determination of the true joint axes and proper instrument placement. Since these studies, her additional investigations (15) have attempted to increase the sophistication of instrument design and application, but confusion remains concerning the types of in-

strumentation, numerical expression of data, and the accuracy and reliability of the techniques of application, which includes starting positions, axes of motion, and body segment stabilization procedures.

## Instrumentation

Instruments designed to measure joint motion fall into two general classifications: measuring devices that are capable of being applied to most joints of the body, and instruments designed for measurement of a specific joint (13, 15). The most widely used instrument that is applicable to most joints is the universal goniometer (Figure 1). It consists of a protractor which has two long slender arms attached to its center, one of which is fixed and the other movable. It is universally adaptable to most joints and it can be used on all types of patients (14).

Moore (15) cited 36 publications that present many variations of instruments designed to measure joint action. Many of the instruments developed are similar to the universal goniometer, but have been mechanically modified to measure specific joint motions. The instruments vary in size and shape. They are designed to measure specific joints and to fit to the contour of the adjacent body parts, or to be applied directly to the lateral surface of the joint (13, 15).

Defibaugh (4) stated, "Each author who has modified it points out the specific advantage his modification has over the protractor modifications of other authors." He also discussed other methods of evaluating joint function. These include visual estimation, radiography, photography, schematography and outline tracings, and trigonometry. Harris (7), Defibaugh (4), and Moore (13, 15) cite many instruments and techniques that have been designed to increase the accuracy of measuring joint motion, yet little information is available in regard to their reliability.

Some attempts have been made to develop electrical instrumentation. Harris (7) discussed one of these attempts which was an electrogoniometer (elgon) developed by Karpovich. The elgon is a goniometer with a potentiometer substituted for the protractor (Figure 2). The main advantage is its ability to measure joint motion during activity. Karpovich and others have identified some difficulties with the elgon in the extreme ranges. At present there are a few joint actions that can be measured with the elgon, but it has not gained popular use.

Leighton (9, 10, 11, 12) has designed an instrument of the pendulum type which used gravity as its origin (Figure 2). It is attached to the body part being measured. Harris (7) stated that the Leighton Flexometer "appears to be the most objective instrument for measuring joint action." This instrument eliminates the concern of establishing the true axis of motion with the joint, therefore error due to inaccurate placement directly over the axis of the adjacent limbs forming the joint is eliminated. Other problems, however, such as standardization and procedures, still exist.

Of the instruments designed to measure joint range of motion, the universal goniometer and Leighton Flexometer are the most widely used. The goniometer, because of its adaptability, is the most practical instrument for clinical use. The Leighton Flexometer, although not used as extensively as the goniometer, has been shown to produce objective joint motion measurements.

## Numerical Expression

Moore (13, 15) and Leighton (9) discussed three systems

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of numerical expression used in goniometry. Leighton (9) believed they are dissimilar enough to make interchange of values impractical. The first system used the full circle or 360 degrees to record the measurements. This system was objected to because it represented large numbers, i.e., 210 degrees of shoulder extension. It never achieved popularity.

The second system is based on the goniometric consideration that 180 degrees is the true expression to the half circle or the sum of the right angles (13). In this system flexion approaches zero degrees and extension is limited to 180 degrees. This method, like the first, is not widely used.

The third system is based on a scale of zero to 180 degrees. According to this system the anatomical position places the joints at zero degrees at which point motion begins and then progresses toward 180 degrees (Figure 4). As motion progresses the numerical expression is recorded in positive numbers. In the case of a joint with restricted extension the numerical expression decreases as the joint improves (13). This is the preferred system. It has been adopted by the American Orthopedic Association and the American Society for Surgery of the Hand. It has been endorsed by the American Medical Association and the Veterans Administration. It is taught by most physical therapy schools and it is being included in athletic training programs in the United States (15).

#### Starting Position

The initial step in precise goniometry is to place the subject in a specific body position, frequently called a preferred starting position (13, 15). Careful selection of the preferred starting position lessens the difficulty of isolating the desired arc of motion. The goniometer can then be positioned with greater accuracy since the position of the subject is less likely to deviate. This allows substitution movements in adjacent joints to be easily recognized and avoided.

Standardization of the preferred starting position for all measurements is essential in a clinical situation. Exact anatomical positions must be recorded to assure standard goniometric measurements and, if a person is physically unable to assume the preferred starting position, it must be stated as such. Moore (13) expressed precisely the importance of establishing and standardizing preferred starting positions:

"It is well to use the anatomical position as a point of reference for the discussion of the technic of goniometry. It is universally understood, standard nomenclature. However, it is extremely valuable to give clearly and specifically the preferred starting position for the measurement of every movement. This should include the exact position of all anatomical parts that may participate in or influence indirectly the movement to be measured. By so doing standardization of procedure is approximated and both intra-individual and inter-operator variances are reduced."

Standardization of the preferred starting position is essential in precise goniometry. By following standardized procedures the variances associated with measuring joint range of motion will be reduced.

#### Axis of Motion

Many authors consider location of the axis of motion the single most important aspect of the technique of goniometry (3, 7, 8, 9, 13, 14, 15, 18). The universal goniometer requires the establishment of the joint axis, preferably the true joint axis, to produce reliable joint motion measurements. The protractor must be placed over bony landmarks that are presumed to be the axis of the joint. Moore (15) cited several studies that indicate no

landmark is or can be a fixed axis of motion. An example of this problem is found when measuring ankle dorsiflexion and plantar flexion in which the lateral malleolus is specified as the key axis of motion.

Instruments which can be attached to body segments, utilizing gravity as their origin in the starting position, are not concerned with the establishment and placement of the instrument to correspond with the establishment and placement of the instrument to correspond with the joint axis (9). Critical establishment and maintenance of body segment stabilization techniques, however, are essential in the use of the gravity controlled instrument. Since the axis of motion shifts as motion progresses, it is not necessary to consider the direct correspondence of the instrument and the joint axis (13, 15). Therefore, elimination of the need to establish the joint axis, as with protractor goniometry, should provide more reliable interpretations of joint motion.

Locating the axis of motion is critical when using the universal goniometer. This requires placing the instrument over bony landmarks presumed to be the axis of motion; however, studies have indicated that no landmark

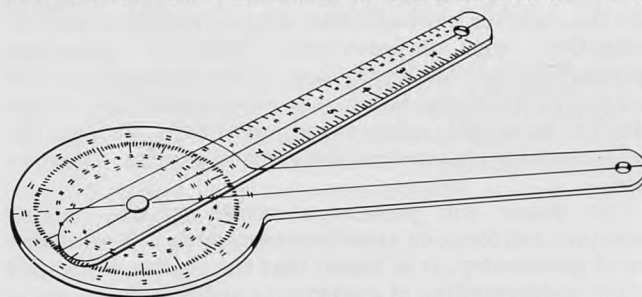


Figure 1  
Universal Goniometer

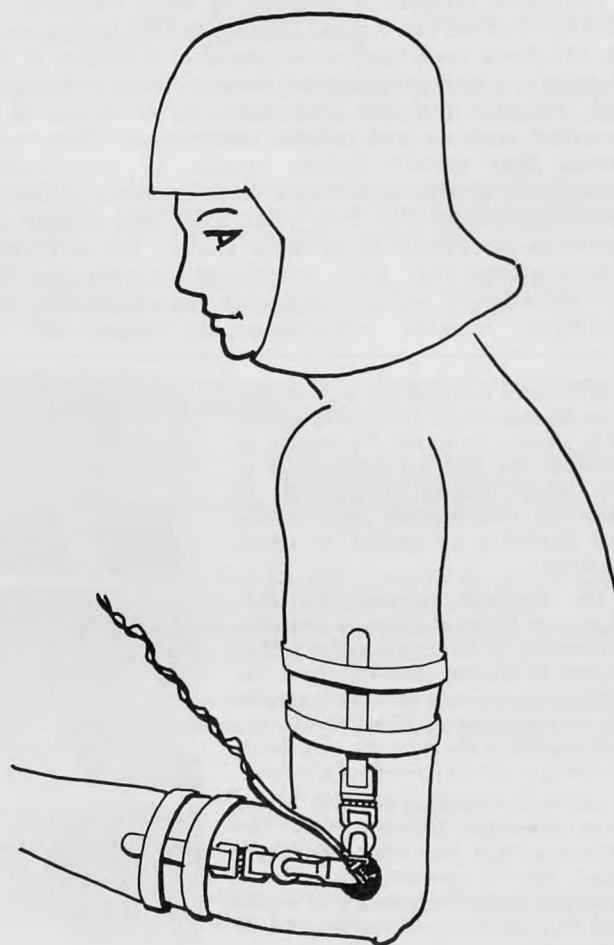


Figure 2  
Electrogoniometer (elgon)



can be a fixed axis of motion. A gravity controlled instrument attached to a body segment is not concerned with placing the instrument over the joint axis which should lead to more reliable measurements.

### Reliability

Reliability (4), simply defined, deals with the consistency of a score or measurement. Does it (the test or the instrument) produce the same measurement consistently under the same conditions? Goniometry must

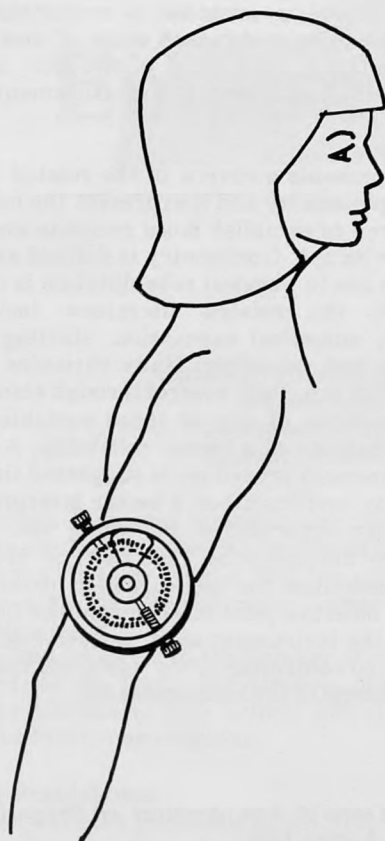


Figure 3  
Leighton Flexometer

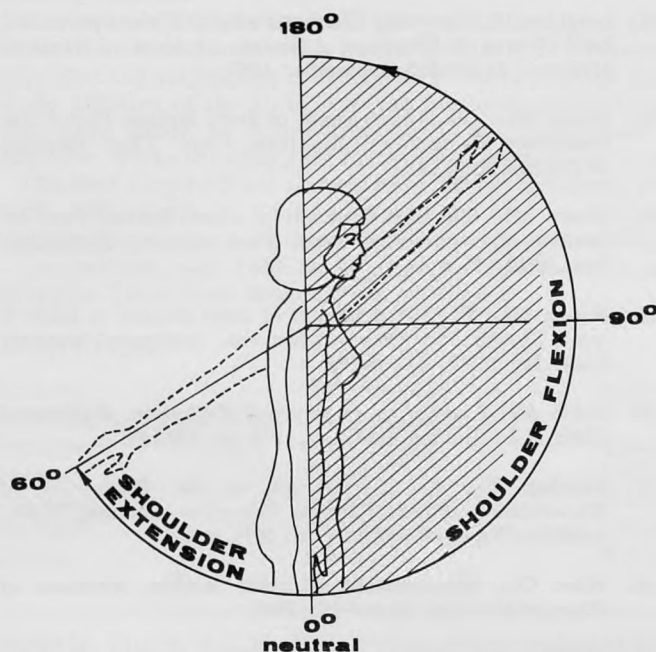


Figure 4  
Numerical Expression — Zero to 180 Degrees

concern itself with reliability — specifically with interindividual and intraindividual reliabilities. Interindividual reliability deals with the consistency of a measurement between two or more persons. If one person takes several measurements and the results are the same, there is a high intraindividual reliability.

Studies have been completed regarding the reliability of goniometers. Hamilton and Lachenbruch (6) have conducted a study with three goniometers in assessment of finger joint angles. Their results indicate that interindividual variation among seven therapists was great enough to question the degree of accuracy. There was a small intraindividual variance which led to the conclusion that an individual therapist is capable of making accurate repeated observations. There was no significant variation among the three goniometers utilized.

Some studies are suspect when reporting reliability measures for an instrument. Leighton (9), in the development of an instrument to measure flexibility and corresponding techniques, concluded that the Leighton Flexometer meets the criteria of validity, objectivity, and reliability; however, on the test-retest situation utilized to determine reliability, no attempt was made to separate instrument reliability from the reliability of the examiner and procedures. Consequently the situation exists whereby the reliability reported is not specifically identified. Hellebrandt, Duvall, and Moore (8) realized the importance of intraindividual reliability when determining the reliability of an instrument. They concluded that the universal goniometer was reliable, but they failed to separate the reliability of the instrument from the reliability of the procedures. Many individual tests of flexibility using various forms of goniometry report high test-retest reliabilities, but all of them fail to separate the reliability of procedures from that of the goniometer. In a more recent article, Boone and her associates (2) confirmed previous findings that measurements varied less when taken by one tester than measurements taken by several testers. They also determined that a single measurement per session was as reliable as repeated measures and that the intertester (0.58) and intratester (0.80) reliabilities for the lower extremity motions was lower than the intertester (0.86) and intratester (0.89) for the upper extremity motions.

Most physical measures remain relatively stable from day to day exhibiting test-retest reliabilities between 0.80 and 0.95 (1). This is remarkable when one considers all of the variables that could effect reliability. These variables fall into several categories, any of which can cause a lower reliability than anticipated. The subjects represent one source of variation through such factors as motivation, fatigue, "good day-bad day," learning, forgetting, sex, age, and range of talent. The test itself can contribute to the problem if it is extremely difficult, too short or too long, and if the procedures of starting position, determining the axes of motion, and body part stabilization are not standardized. The testing situation can be an important variable if instructions are confusing or incomplete, the testing environment is not conducive to eliciting the subjects' best efforts (too hot, too cool, too noisy), the time of day is inappropriate (the afternoon produces more stable results), or warm-up is indiscriminantly allowed.

The factors which are most familiar with causing variations in scores deal with the measurement process and the evaluator. The precision of the measuring instrument, errors in measurement, the number of trials per examination, and recording errors all affect reliability. The competency of the evaluator (intraindividual), his/her concentration, familiarity with the measuring instrument, motivation and the number of evaluators (interindividual) can cause great differences in reliability.

Because there are so many obvious variables that affect reliability, and many obscure ones as well, one wonders what level of reliability is acceptable. In general the acceptable levels of reliability consider any correlations below 0.80 as poor or questionable. Sheehan (17) considered that a correlation as high as 0.80 as poor or questionable. Sheehan (17) considered that a correlation as high as 0.80 should be demanded if a teacher is to justify a teacher-made test, and at least 0.90 for tests in which individuals are to be evaluated. Safrit (16) and Ebel (5) both recommend the reporting and use of the standard deviation of the scores along with the reliability. As the range of talent (scores) increases, so does the reliability, consequently the reliability coefficient itself may be insufficient to use in judging the merits of the test of the instrument. The procedure called the standard error of measurement can be employed to take into consideration the range of talent (standard deviation of the scores) and the reliability.

The process to determine the standard error of measurement is to multiply the standard deviation of the scores by the square root of  $1 - r$ .

$$\sigma_M = r \sigma \sqrt{1 - r}$$

Example: Test I. Standard Deviation = 10,  $r = 0.85$ , standard error of measurement = .240.

Test II. Standard Deviation = 3,  $r = 0.75$ , standard error of measurement = 1.644.

If one were to interpret these results, one would say in the case of Test I that 68 percent ( $\pm$  one standard deviation from the mean) of the errors of measurement will be 3.240 or less. This is clearly a much larger possible error of measurement than Test II, where the errors of measurement are approximately one half as large. In this instance Test II is actually the better of the two, a fact that would go unnoticed if only the reliability were reported.

As important as reliability is to goniometry, one must not lose the perspective that reliability, validity, and objectivity are dependent upon each other. Good objectivity increases the reliability of a test, and a test must be reliable in order to be valid. Thus standardization of administrative procedures and increased interindividual and intraindividual reliabilities are invaluable to the study of goniometry.

It is important to consider the reliability of the instrument as well as the measurement procedures when measuring joint motion. Reliable instrumentation and procedures ( $r > .90$ ) are essential to accurately evaluate any results. Including a standard error of measurement with the reliability coefficient allows for better interpretation of the consistency of a measurement.

### Summary

This paper presents a review of the related literature pertaining to goniometry and it expresses the need for additional research to establish more accurate and reliable procedures for its use. Goniometry is defined and the importance of its use in physical rehabilitation is discussed. A review of the related literature includes instrumentation, numerical expression, starting position, axis of motion, and reliability. Many variables which influence reliability are cited; control through standardized, objective procedures of any of these variables will increase the probability of a higher reliability. A standard error of measurement procedure is suggested (in addition to the reliability coefficient) as a better interpretation of actual reliability. Procedures for using the universal goniometer are described by Cole (3) and Moore (15). Leighton (9) describes the measurement procedures he established to measure joint motion with the flexometer. Regardless of the instrument used, serious consideration must be given to control the many variables that may influence the outcome of the measurements.

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## A Tip from the Field:

# Empire Gold!

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This article is dedicated to preserving the sanity of any N.A.T.A. member who is given the task of coordinating the athletic training aspects of an Olympic style games. In early July of 1978 the author was given just such a task in conjunction with the Empire State Games to be held one month later at Syracuse, New York.

No guidelines in terms of the number of staff, the amount and type of supplies needed, or the types and numbers of injuries to be expected could be found in the literature. This article will attempt to rectify this lack of information for future competitions.

### The Empire State Games

The games were the brainchild of the New York State Commission on Sports and Winter Games which oversees the Lake Placid 1980 Winter Olympics. They were developed by the New York State Task Force on Sports and Physical Fitness. Both the latter organization and the Games were conceived as New York's answer to criticism that the state was not doing enough for amateur athletics.

The New York State Trainers Association had been attempting to become involved with the Games since January of 1978. The two major reasons for this were that the association is dedicated to improving the health and safety care of the athletes of the state, and the favorable publicity and public relations that were likely to result from such an involvement were inestimable. However, it was not until July that the association was invited to help.

The first Empire State Games were held at Syracuse, New York on August 16-20, 1978. Syracuse University was the host institution. The events were contested at 26 sites both on campus and in the surrounding Syracuse area.

Competition was held in 21 Olympic sports with open and scholastic divisions. These were broken down as follows:

### OPEN DIVISION

Archery	Fencing	Synchronized
Athletics (track and field)	Field Hockey**	Swimming**
Basketball	Gymnastics	Team Handball*
Boxing*	Judo	Volleyball
Canoeing	Rowing	Water Polo*
Cycling*	Shooting	Weight Lifting*
Diving	Soccer	Wrestling*
	Swimming	

Hollis W. Powers, A.T., C., M.S., is head athletic trainer at S.U.N.Y. Plattsburgh and was Coordinator of Athletic Training Aspects at the Empire State Games in 1978.

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**SCHOLASTIC DIVISION**

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Basketball    Field Hockey\*\*  
Diving    Soccer Wrestling\*

Swimming  
Volleyball

\*Men Only  
\*\*Women Only

The state was broken down into six geographical regions with each region sending teams in each sport in both the open and scholastic divisions. Competition was between regions.

4,817 athletes were chosen for the Games making this the largest Olympic style competition ever held in the United States.

Even more impressive is the fact that 50,000 athletes were involved in the regional qualifier competition.

The Games are projected to be held again in 1979 and become biennial after that being held in off years between the Olympics and the National Youth Sports Festivals.

**Organization**

As coordinator of Athletic Trainers for the Games the author made two trips to Syracuse to meet with the organizing committee and visit each site for advance planning.

A call was sent out to association members for volunteers and 40 responded including the Syracuse University staff led by Don Lowe. Supplies were ordered after discussing what would be needed with the Executive Council of N.Y.S.A.T.A.

On August 16th almost 6,000 athletes, coaches, officials, administrators and trainers converged on Syracuse and the Games began. The training contingent marched as a separate group in the opening ceremonies before thousands of spectators and political dignitaries. Each trainer wore a T-shirt designed for ease of recognition during the Games.

Trainers were housed with the sport to which they were assigned. Transportation to and from the site was by shuttle busses which ran every 15 minutes.

A central athletic training command post and supply center was set up at a campus training room and manned by five Syracuse University trainers. This was open from early morning to late night. Competition began as early as 7 A.M. in some sports and ran to midnight in some instances.

The coordinators' duties included traveling to each site on a daily basis to smooth out problems which developed.

Backup examining rooms or tents were provided at each site. There was access to a telephone or walky-talky for emergency communications. Ambulances were stationed at critical sites and were called when needed at other sites. Physicians were also stationed at critical sites. However, a medical director for the Games was never appointed and there were only a few physicians present.

The Syracuse University Infirmary, Teaching Hospital, and two other hospitals close to the campus were available as needed.

Liability was a definite problem. Insurance companies were not interested in insuring the doctors and trainers. This problem was finally avoided by the Department of Parks and Recreation which was in charge of the Games issuing a "Save Harmless" which absolved the doctors and trainers of responsibility for liability.

**Injuries**

A total of 294 injuries were reported by the trainers. Injuries recorded ran from sprains and strains to contusions to dislocations and fractures. Seventy of these injuries were referred to medical authorities with none of them being catastrophic.

Field Hockey led the way with a total of 71 reported injuries followed closely by soccer with 63. The other sports with significant totals were as follows:

Basketball .....	51	Wrestling .....	30
Athletics (track/field) .....	25	Team Handball .....	20
Judo .....	17	Gymnastics .....	10

The rest of sports had 3 or less reported injuries. It was felt that because of the circumstances not all injuries were recorded and the totals in reality were probably a little higher.

Numerous bee stings were reported and should be a consideration in any advance planning. Included was a case of a young man who stepped on and underground bees nest while carrying one of the fragile rowing shells. As a result he received 10 bee stings.



It was noted by many trainers that a high percentage of the injuries reported were recurrences of previous injuries.

The following is a breakdown of the more frequent types of injuries incurred in the sports with high injury totals:

**Field Hockey** - The most frequent injury encountered was contusions caused by the ball. Sprains strains and lacerations were also common. The lower limbs and head were involved the most.

**Soccer** - contusions were most frequent, followed by sprains. The male teams played on Astro-Turf which resulted in quite a few abrasions. Infection from abrasion is a common occurrence on this surface according to Syracuse University trainers. This should be a consideration in planning. The lower limbs were involved the most.

**Basketball** - Sprains and contusions of the lower limb were the most frequent injuries.

**Wrestling** - Strains followed by sprains and concussions were the most frequent.

**Athletics (track/field)** - Cramps and strains were most common with the lower extremities and low back areas primarily involved.

**Team Handball** - Contusions and sprains of lower extremities were most frequent.

**Judo** - Sprains were most common.

Boxing was not covered by athletic trainers as they brought their own medical people. Archery, Shooting and Synchronized Swimming were not directly covered although they had access to the central training room if desired.

### Supplies

The following list of supplies was found to be quite adequate for an athletic competition of this magnitude.

30 speed packs 1 1/2" white tape	4 large sheets of vinyl foam rubber
15 cases 2" light elastic tape	1 can trainers moleskin
3 cases 1" white tape	10 boxes plastic bags 75/
10 cases underwrap	2 doz. heel cups
5 cases 3" elastic tape	6 cases cold packs
3 cases Band-aids 1" 1500/	20 tubes antibiotic ointment
8 boxes Extra Large Band-aids 50/	10 pints alcohol
1 box Skin Closures 250/	1 doz. oral screws
15 boxes 3 x 3 gauze pads 100/	2 doz. arm slings
2 package cotton tipped applicators 1000/	2 doz. crutches
1 box tongue blades 500/	20 empty first aid kits
15 pts. peroxide	20 7 1/4" bandage scissors
10 cans spray foam soap	20 penlites
10 1 lb. jars antiseptic vaseline	40 penlite batteries
8 6 oz. cans spray tape adherent	20 thermometers
10 16 oz. cans spray tape adherent	20 thermometer cases
2 doz. 2" ace bandages	20 ice chests
4 doz. 3" ace bandages	10 5 gal. water dispensers
4 doz. 4" ace bandages	5 oz. cups
4 doz. 6" ace bandages	20 1 lb. jars mild analgesic

The amounts of non-expendable items such as first aid kits, water dispensers, and ice chests are dependent on the number of sites, and whether or not events are inside or out.

### Recommendations

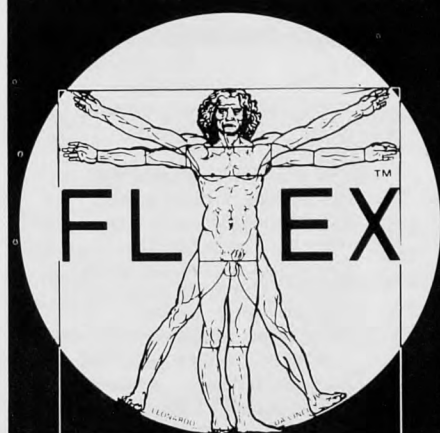
Having experienced an athletic event of this magnitude once, the following are recommendations for completing medical and athletic training aspects of the games:

1. **Planning** - at least six months is needed to plan for the Games. An overall medical director and a coordinator of athletic trainers should be appointed at that time. Meetings should be held between these two and the trainer of the host institution. Visits to each of the sites should be made for planning purposes.

Meetings should also be held with the various sports chairman to find out what they require. The author was not familiar with several sports and this made it difficult to decide exactly what was needed.

2. **Procuring Trainers** - because of the late start a high percentage of college student athletic trainers were used and confusion developed on arrival day as to the credentials and who was coming and who wasn't. It was felt that while it may be desirable to involve top students in events such as these the percentage should be much lower. This could be avoided by a much earlier start and by applications designed to weed out all but experienced people.

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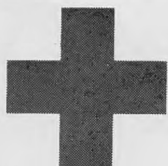
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3. *Housing* - the trainers were housed with the sport to which they were assigned. This had obvious advantages in terms of closeness to the athletes and coaches of the sport assigned to. However, this created a communications nightmare. It proved almost impossible to reach the trainers with messages and last minute changes.

On reflection, it is felt that all trainers should be housed in a dormitory central to all the athletes dormitories. A small training and first aid room operating 24 hours a day could be set up in this dormitory to serve the athletes and this could also serve as the central supply point.

In this manner communications and control between trainers and with administrators would be facilitated. Friendships between trainers would be more readily fostered and the exchange of ideas would be much greater.

There was one case of a student trainer who developed heat exhaustion and had to be taken to a hospital. He was nervous, was not getting much sleep and wasn't eating. This situation could be avoided with the central dormitory concept.

4. *Food* - this was one of the systems that developed problems continually. In order to get box lunches at the site so a competitor or trainer did not have to leave the site, the coach or sports chairman had to call by midnight the day before.

5. *Communications* - the coordinator should have a phone in his dormitory room so that administrators and coaches could reach him at night with problems and schedule changes.

In addition it took the author one entire day to complete the circuit of sites. If a problem developed in the morning and the coordinator did not reach the site until the afternoon it often was not resolved. It is therefore recommended that there should be two mobile trainers equipped with walky-talkies or radio phones to act as coordinators.

There should be a telephone or walky-talky immediately available at each site for emergency communications. In addition there should be a central communications point all trainers can call with problems. This center should be linked to the two mobile coordinators and to the Games headquarters. The ideal place would be the central training room of the host institution manned by the institution's head trainer and his staff since they would be most familiar with the institution and surrounding area.

6. *Assigning Trainers* - the numbers will depend on such factors as the number of sites, the sports involved, the frequency of injury expected, the length of competition and the location of training rooms.

At the Games some sports competitions lasted 12-14 hours. In these cases we doubled the number of trainers so they could relieve each other. In some cases two or more sports were conducted at one facility which cut down on the number of trainers needed. In one instance three sports were conducted with easy access to the Syracuse University training room manned by five trainers.

The following are recommendations broken down by sport. They are based on the number of trainers that should be on duty at any one time at each site.

*Field Hockey* - 2 trainers

*Wrestling* - 2 trainers (4 mats are in use simultaneously)

*Soccer* - 2 trainers

*Athletics (track and field)* - 4 trainers. Sheer magnitude of numbers (1200 athletes) involved dictated this. It was most helpful to have trainers knowledgeable in the use of massage at these events. In addition race walking, marathon and decathlon-pentathlon were held at separate sites. Decathlon were held at separate sites. Decathlon-pentathlon required the services of one trainer. Race walking and marathon required two trainers and again massage was helpful. Each was held for only part of one day.

*Judo* - 2 trainers. This sport produced the highest injury rate being only contested for a total of seven hours. In addition they requested that someone be present at their practices because of the high incidence of injury incurred.

The rest of the sports require only one trainer for each site. Cycling was another sport where massage proved most helpful as there was a great deal of cramping at the finish.

7. *Ice* - since this is crucial to first aid of most athletic injuries there needs to be a well defined method of supplying ice when needed. Ice machines in dining halls, the training room, cafeterias in schools being used as sites, and in one case a nearby McDonalds was used. Trainers filled up in the morning on the way out to a site. However, in some cases resupply proved to be



a problem. A van designated for this purpose could be one solution. This could also solve the food supply problem.

8. *Injury Report Form* - the following is the form used during the games with modification dictated by experience. It was printed on a piece of paper about 4" x 6".

### EMPIRE STATE GAMES Injury Report Form

NAME \_\_\_\_\_ SEX \_\_\_\_\_ AGE \_\_\_\_\_  
 REGION \_\_\_\_\_ SPORT \_\_\_\_\_ EVENT \_\_\_\_\_  
 TYPE OF INJURY \_\_\_\_\_  
 \_\_\_\_\_  
 BODY PART \_\_\_\_\_  
 RECURRENCE \_\_\_\_\_  
 MECHANISM \_\_\_\_\_  
 \_\_\_\_\_  
 TREATMENT \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 REFERRAL \_\_\_\_\_  
 COMMENTS \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 PERSON REPORTING \_\_\_\_\_

#### 9. Miscellaneous

It would be desirable for the trainers to report a day early so that each trainer could visit the site of the competition they are assigned to become familiar with it and iron out any bugs.

Physicians should be assigned to the sports with the higher injury rate. Particularly the contact sports. In some cases a physician may be able to cover more than one sport when the sites are located at the same place.

Ambulances should be stationed also at the high injury - contact sport events. Particularly when more than one site is at the same place. In addition chase ambulances should be available for the marathon, race walking and cycling road race events.

#### Conclusion

While the Empire State Games proved to be hard work with long tiring hours for the trainers they also proved to be fun and highly rewarding. We received many favorable comments from athletes, coaches, administrators and politicians. This and the great visibility we attained with people who had never seen or who did not know what an athletic trainer was made our involvement a public relations bonanza.

#### CURRENT LITERATURE

*Continued from page 138*

2(2):60-3, July 15, 1978.

"Role of the Pediatrician in Sports Medicine," Findaro, J. *Pediatric Annals*. 7(10):676-80, October, 1978.

"Tears of the Anterior Cruciate Ligament in Young Athletes," Chick, R. et al. *Journal of Bone and Joint Surgery (Am)*, 10 Shattuck St., Boston, Mass. 02115. 60(7):970-3, October, 1978.

"Tennis Elbow: Evaluation, Treatment, and Prevention," LaFreniere, J. *Physical Therapy*. 59(6):742-746, June, 1979.

"The Health Examination for Participation in Sports," Shaffer, T. *Pediatric Annals*. 7(10):666-75, October, 1978.

"The Physician and Optimum Body Weight for Junior High and High School Wrestlers," Tower, J. *Alaska Medicine*. 20(4):60-2, July, 1978.

"Traumatic Lesions of the Metatarsophalangeal Joint of the Great Toe in Athletes," Coker, T., Arnold, J., and Weber, D. *The American Journal of Sportsmedicine*. 6(6):326-334, November-December, 1978.

"Unexpected Cardiovascular Responses in Athletes," O'Brien, M. et al. *Journal of Sports Medicine and Physical Fitness*, Turin, Italy. 18(2):189-91, June, 1978.

"Update on Anabolic Steroids," Silvester, J. *Scholastic Coach*. 48(9):74, April, 1979.

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## ABSTRACTS

"A Functional Semirigid Support System for Ankle Injuries", Stover, Cornelius N., M.D., *The Physician and Sportsmedicine* 7:71-78, May, 1979.

Ankle injuries cause considerable disability at all levels of sports competition. There is controversy over treatment methods, particularly in the lateral sprain, and treatment varies from simple strapping to prolonged immobilization in plaster. Studies concluded there was no verifiable difference after plaster immobilization or strap-

ping. Return to work was sooner in patients whose injuries were treated with simple strapping and early mobilization. Disadvantages of plaster immobilization include joint stiffness, decreased venous return, loss of tissue tone, and local and distant atrophy. Making an early decision (of treatment) is difficult. A semi-rigid system of functional bracing using orthoplast was devised. The system is versatile and can be applied to both new injuries and chronic problems. The dynamic orthoplast splint is shaped like a stirrup. During use the stirrup is applied and held in place with an ace bandage or additional taping as required. The splint permits dorsiflexion and plantar flexion and a degree of inversion. The orthoplast stirrup allows enough mobility for participation in most athletic events and yet protect the healing and reorganizing ligamentous tissue. It provides for muscular function, prevents atrophy, and allows joint mobility.

Marty Erb

Symposium: Shoulder Problems in Overhead-Overuse Sports, "Problems Among the inexperienced and experienced Athlete," Jackson, D.W., *The American Journal of Sports Medicine*: 7: 142-44, March/April, 1979.

Many sports requiring repetitive strenuous overhead motion of the shoulder have become increasingly popular in this country. Tennis, volleyball, racquetball, softball, handball, swimming, and gymnastics are now being enjoyed by almost every age group. Often the athletes are

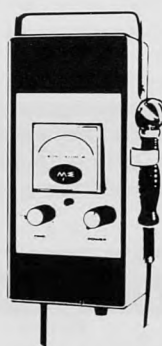
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participating on a year-round basis in their chosen sport and will consider a prolonged period of rest only as a last resort in their treatment. Regardless of how well an athlete conditions or stretches out the shoulder, there are unusual events and wear and tear changes that may result in some period of disability related to the shoulder in those participating for a number of years in a given sport. Proper form will allow maximum performance to be achieved from the musculoskeletal system, but does not protect it from overuse and abuse injuries. Much attention has been given to the importance of stretching the Achilles tendon complex (i.e., in the distance runner), but we have neglected the anterior capsule and rotator cuff stretching and adequate warm-up and conditioning techniques for the demands that one will place on the shoulder in overhead motion. Failure to pay attention to "small shoulder injuries" and continue to try and play in the face of pain usually results in a long period of disability. The problem of overhead-overuse shoulder injuries can be stated simply as repetitive microtrauma of the cuff which leads to significant tissue reaction. Some of the factors to be considered are: training, anatomy, prevention and treatment, and chronic injuries.

Tim Garl

"Shin Splints: Sports Medical Advisor," Richard C. Allen, *Athletic Journal* 59:50, 80-81, March, 1979.

It has been estimated that at least one out of every ten runners has at sometime experienced shin soreness or shin splints. Shin splints is a generalized term that has been used in the past to describe an overuse syndrome associated with the frontal aspect of the lower leg. Common symptoms consist of inflammation, edema near the site of pain, and stretching of the muscle from the bone, especially the posterior tibialis and flexor digitorum longus muscles. It is calculated that some 10 million or more people are actively engaged in running or jogging on a regular basis and that on the average, each foot is planted on the ground over 3 million times each year over and above the activities of daily living. Shin splints cannot be isolated to any one group of people. As mentioned previously, the leading cause of shin splints can be attributed to improper conditioning with an imbalance between the strong gastro-soleus musculature and the neglected anterior of frontal musculature of the lower leg. It must be realized that the musculature of the leg is the primary structural support and that the ligaments play a secondary role. In order to decrease the incidence of shin splints and other overuse syndromes, an individualized strength training program should be initiated by each athlete to strengthen the individual muscle group beyond the demands of the sport in which he participates. Best results are obtained when treatments are done twice a day.

John Worley

"Chondromalacia Patella in Athletes," Dehaven, K.E.; Dolan, W.A. and Mayer, P.J., *The American Journal of Sports Medicine* 7:5-11, Jan/Feb., 1979.

A prospective analysis has been carried out in 100

athletes in whom the clinical diagnosis of chondromalacia was made. Complete knee examinations were performed in all patients with special emphasis upon thigh atrophy, effusion, Q angle, apprehension with lateral displacement of the patella, patellar facet tenderness, pain with dynamic patello-femoral compression, joint line tenderness, and MacMurry sign. The diagnosis of chondromalacia patella was established on the basis of the history, physical, and x-ray findings. A standard conservative management program was instituted in all patients with no regard to the etiology of chondromalacia. The treatment program consists of four states: 1) symptomatic control, 2) a progressive resistance exercise program of isometric quadriceps and isotonic hamstring exercises, 3) a graduated running program, 4) a maintenance program. Control of the symptoms is first achieved by activity modification and regular salicylates if tolerated. The progressive resistance exercise program is initiated as soon as possible. It is stressed that the quadriceps exercises are to be performed utilizing isometric techniques only, while the hamstring exercises are performed in the usual isotonic method. The graduated running program was not started until 1) the symptoms were controlled, and 2) the patients were lifting 30 lbs. with the quadriceps. The maintenance program is felt to be just as important as the other phases. It consists of 1) unrestricted activities as tolerated, 2) continuing the PRE program, and 3) other adjunctive measures. The results indicated 66 percent were able to resume unrestricted athletic activities, and an additional 23 percent were able to resume restricted athletic activities. The remaining 11 percent were unable to resume any athletic activities.

Marty Erb

"Fractures of the Hook of the Hamate in Athletes," Stark, H., Boyes, J., and Ashworth, C., *The Journal of Bone and Joint Surgery* (American Volume) 59-A 575-582, July, 1977.

Over an eight year period, twenty male athletes (baseball players, golfers, tennis players) presented fractures of the hook of the hamate but with no history of falling. It is believed, due to the lack of falls, that each fracture occurred as the result of the bat, club, or racket forcibly impinging on the hook, either when the grip was relaxed or when the centrifugal force overcame the grasp. In baseball, this would occur at the end of a forceful or checked swing; in tennis, attempting a difficult shot could cause such forces; in golf, the club handle seems to strike at the end of a swing, but the force transmitted through the shaft when the club head accidentally strikes the ground is especially suspect. In every case, the fracture occurred in the hand grasping the end of the bat, club, or racket. Conventional x-rays often fail to reveal this fracture, and variable carpal-tunnel views are in order when hamate fracture is suspected. These should be bilateral, lest a non-uniting non-fractured hamate be mistaken for a fracture. Clinical signs may include a history of onset of pain associated with swinging an instrument, pain without swelling (in old fractures), painful abduction and adduction of the little finger only when resisted, painless grip, but discomfort when swinging a cylindrical object, tenderness to hamate palpation, and ulnar nerve dysfunction. In cases of ununited fracture, excision of the fragment is recommended, to decrease the possibility of flexor tendon rupture.

Greg Vergamini

# In Memoriam

ROBERT FOSTER HAND



The sudden passing of Bob Hand on May 17, 1979, in Houston, Texas, of a massive heart attack was a shock to all of his friends and to the campus of the California State Polytechnic University, Pomona.

Hand was a graduate of Louisiana Tech, Ruston, Louisiana, attending on a boxing scholarship. He received his masters degree at the University of Arkansas and began working as a trainer at the Naval Training Center, San Diego. After seven years the program closed and Bob completed fourteen years as a trainer and as an instructor at Cal Poly, Pomona. He served as a secretary for District 8, NATA.

In a resolution dated May 30, 1979, Hand's many accomplishments and contributions were recorded in the minutes and archives of the Faculty Senate and adopted by the Faculty Senate of California Polytechnic University, Pomona.

Hand is survived by his widow Verla H. Hand, a daughter, Deborah K. Brown, Houston, Texas, and a son, Robert F. Hand Jr., Sacramento, CA.

Plans to establish a scholarship fund are underway. This scholarship will be awarded to an outstanding student who is interested in pursuing a career in athletic training. Contributions may be made to:

Robert Foster Hand Memorial Fund  
California State Polytechnic University  
Pomona, CA 91768



# In Memoriam

L. DAVIS "SANDY" SANDLIN



Sandy Sandlin died on the morning of July 10, 1979 of a heart attack.

Sandy was the trainer at the University of Chattanooga (now University of Tennessee Chattanooga.) He has served as the Moccasins' Trainer for 36 years. He was at Georgia Tech for two years during the war years and went to the Sugar and Orange Bowls. He was the only trainer in the Southern Conference to be selected to the Baseball All-Star Games for eight years. Sandy was the Trainer and Traveling Secretary for the Chattanooga Lookouts Baseball Team from 1937 - 1965. He was forced to retire at University Tennessee Chattanooga in 1975 and has worked as trainer for The Baylor School until his death.

Sandy was born in Huntsville, Alabama on January 8, 1901. He attended Chattanooga High School and lettered in both football and track.

His deeds are many, his kindness unlimited and the respect he has generated from athletes and coaches alike would stretch halfway around the world. In 1971 the Blue Key Society at UTC inducted the Sandman into their organization. On his 25th anniversary, Sandy was honored by a telegram from the late J.F. Kennedy and an honorary letter in the Letterman's Club at the University.

The Chattanooga Exchange Club awarded Sandy with their highest honor, *The Book of Golden Deeds*.

The Tennessee Sports Hall of Game inducted "Doc" Sandlin on January 31, 1974, into the Volunteer's Elite group of men and women.

We send our sincere sympathy to Sandy's wife, Eleanor, and their three children, Mrs. C. Sheridan Jackson, David, and Joseph, and their four grandchildren.

It was a great honor to know Sandy and one that will not be forgotten.

"He served God, who served his creature." Truly this man lived a full life.

# PROCEEDINGS of the NATIONAL ATHLETIC TRAINERS ASSOCIATION

## BOARD OF DIRECTORS

June 15-19, 1979  
Stouffer's Riverfront Hotel  
St. Louis, Missouri

### SUMMARY OF ACTIONS

#### NATA BOARD OF DIRECTORS

The following agenda items were considered and actions taken by the NATA Board of Directors at its meetings held on June 15, 16 and 19, 1979 at Stouffer's Riverfront Hotel, St. Louis, Missouri, Mr. William Chambers, President, presiding and with the following present:

Mr. William H. Chambers	President
Mr. Otho Davis	Executive Director
Mr. Bruce Melin	Parliamentarian
Mr. Wesley Jordan	District 1
Mr. Richard Malacrea	District 2
Mr. Herman Bunch	District 3
Mr. Andy Clawson	District 3
Mr. Robert Behnke	District 4
Mr. Frank Randall	District 5
Mr. Cash Birdwell	District 6
Mr. Troy Young	District 7
Mr. Donald Chu	District 8
Mr. Bobby Barton	District 9
Mr. Larry Standifer	District 10
Mr. Gary Craner	District 10

#### I. AUDIO VISUAL AIDS:

No action in the report. Report approved as presented.

#### II. CAREER INFORMATION SERVICES:

It was moved by District 8, seconded by District 10 to accept the report as presented and also grant the request for funds in the amount of \$1,000.  
The report is as follows:

##### CAREER INFORMATION AND SERVICES COMMITTEE ANNUAL REPORT 1978-79

1. There is probably an adequate number of brochures on hand to meet anticipated requirements for the coming year.
2. Due to changes in N.A.T.A. officers and pertinent chairmanships, the present brochure and insert has become somewhat outdated.
3. The Chairman requests that the Committee be authorized a maximum allocation of \$1,000 to enable the publication of a revised and updated brochure during the new fiscal year 1979-80.
4. The budgetary allowance (\$200) for fiscal year 1978-79 was not expended.
5. Anticipated income from payments for bulk brochure requests should continue to cover normal committee expenses. Except for the cost of printing new brochures and inserts, the Committee should be self-supporting.
6. The Committee ends the year with a cash balance of \$145.55. The Committee did not use any N.A.T.A. funds during the current year.

#### III. REPORT OF TREASURER:

Mr. Brooks McIntyre, Business Management Accountant, employed to supervise the books and accounts of the Association, presented to the Board and discussed with the Board his proposal for revising the accounting system to better conform with basic accounting principals of organizations of this size and also commented on some ideas relative to the future financial goals of the Association and various ways of reaching these goals, all of which were accepted as information by the Board and filed for future consideration relative to plans for the financial growth of the Association.

#### IV. DRUG EDUCATION:

There was a discussion relative to establishing a section in the Journal for publication of this type of information. The discussion indicated that no one really saw the material that presently comes out from the committee. It was moved by District 8, seconded by District 10 to deny the request for \$200 per year as requested by the committee for the dissemination of drug literature, with the further provision that the committee create an article or articles for publication concerning the matter of drugs for Journal publication, at least once but no more than twice a year and to refrain from any commercialism in the material. The motion was carried 10-0.

It was further moved by District 10, seconded by District 7 and carried 10-0, that the committee be given a budget of \$100 for the purchase of drug education materials in publications, for the purpose of creating articles in the Journal.

#### V. HISTORY AND ARCHIVES:

It was noted from the report that the book concerning this matter was planned to be ready sometime during the summer months, following which it was moved by District 10, seconded by District 9 and carried 10-0 that the report be received as information.

#### VI. HONOR AWARDS:

It was moved by District 7, seconded by District 2 and carried 10-0, that the Board request that George Sullivan continue in his present position because he is the best person for the job.

A discussion also ensued as to the re-use of material for subsequent submission of names of candidates not selected during the first time. It was moved by District 7, seconded by District 2 and carried 10-0, to request the committee chairman to return this material on Hall of Fame candidates that are not accepted.

It was likewise moved by District 4, seconded by District 5 and carried 10-0 to accept into the Hall of Fame, Robert Weingart from District 4 and Byron Bird from District 5.

It was moved by District 6, seconded by District 4 and carried 10-0, to accept for Honorary Membership the names of Robert Clinger from District 4 and Dr. Tom Coker from District 6.

It was moved by District 9, seconded by District 1 and carried 10-0, to accept for the Twenty-five Year Award the names of Donald Fauls from District 9, Mike Linkovich from District 1 and Thomas Healon of District 1.

It was likewise suggested by Mr. Barton that if the titles of these individuals were going to be used in connection with these awards that a check be made to make certain that all titles were accurate as of the present moment.

#### VII. INTERNATIONAL GAMES:

Upon indication that there was no report on this matter, by common consensus, the matter was left open as an agenda item to be considered with possibly other later reports.

#### VIII. PUBLIC RELATIONS:

The report was noted as being informational. It was suggested by Mr. Chu that consideration might be given to the abolishment of this committee and having this work done by a professional public relations consultant.

It was likewise suggested by Mr. Chambers that the chairman of the committee be reminded that the Board had previously approved a committee for him and that this was not to be a committee of one individual.

It was moved by District 5, seconded by District 9 to accept the report as information. The vote was carried by a vote of 9 in favor, none against and one Director (District 8) abstaining from voting.

#### IX. AMERICAN ACADEMY OF FAMILY PHYSICIANS:

It was indicated that no report had been received and, therefore, no action was necessary.

#### X. AMERICAN ACADEMY OF PEDIATRICS:

It was moved by District 8, seconded by District 10 and carried 10-0, that the report be accepted as information, with the Board likewise approving further liaison with this group to be continued.

#### XI. AMERICAN COLLEGE HEALTH ASSOCIATION:

It was moved by District 1, seconded by District 2 and carried 10-0, that the report be accepted as information, with the Board likewise approving continued liaison with this group.

The reports are as follows:

April 3, 1979

#### MEMORANDUM

TO: Sam McCottry, M.D., Vice President for Liaison Activity; A.C.H.A.

FROM: Don Cooper, M.D., Liaison Representative to the National Athletic Trainers Association

SUBJECT: Liaison Report for Year 1978 from National Athletic Trainers Association

The 29th Annual Meeting of the National Athletic Trainers Association was held at the MGM Grand Hotel at Las Vegas, Nevada on 12, 13, 14, and 15 June 1978. The attendance and participation was excellent. The total attendance was over 1600 people with nearly 1000 trainers and student trainers present. The total national membership of all classifications of the N.A.T.A. is approximately 6,000. This past year of 1978 they had approximately 400 students taking their N.A.T.A. certification examinations. At the present time there are 52 colleges or universities that offer a degree in athletic



training.

The theme of 1978 was "New Frontiers in Athletic Training" and there were many excellent physicians and trainers on the program. The N.A.T.A. continues to get better participation by its members at their scientific sessions than by any other organization I have ever been associated with. As always it is a refreshing experience to have the opportunity to attend the N.A.T.A. National Meeting. Even in Las Vegas the meeting attendance stayed high.

There are still many unanswered problems in job placement for both the student trainers and for the certified trainers. Funding of jobs remains a very difficult area for many school boards and athletic departments, the main hope is that more and more high schools will hire full time trainers. At the present time, there are several states that are providing licensure for athletic trainers. The trainers in all of the other states have been asked to work on getting a state licensure plan for their respective states. The increased activity with lawsuits in sports puts the trainers in a vulnerable position as well as the coaches, team physicians, and the schools themselves. Trainers were being told they better get some liability insurance.

Continuing education is becoming a real part of their overall programing. In January of 1979 a second post graduate educational program was again held in Nashville, Tennessee. Over 100 participated in it and the reports of it were excellent. This year their President's Challenge Award went to Dan Hanley of Brunswick, Maine. They continue to award several scholarships each year to deserving young student trainers. The trainers are still working on the collection of meaningful data for the N.A.I.R.S. project in cooperation with Penn. State University.

Mr. Bill Chambers of Fullerton Junior College in Fullerton, California is the new President of the N.A.T.A., and Mr. Otho Davis of the Philadelphia Eagles remains the Executive Director. Mr. Jim Dodson of Midland, Texas continues to represent the N.A.T.A. to the A.C.H.A. as their liaison person. The trainers now have their home office located at Greenville, North Carolina where a Mary Edgerley is a full time Executive Manager for the organization. They are getting all their membership roles on a computer.

The Journal of the N.A.T.A. continues to improve and furnish many excellent papers on Sports Medicine. It continues to be a rewarding experience to have the honor of being the liaison representative to the N.A.T.A. from the A.C.H.A. The next Annual Meeting of the N.A.T.A. will be held on 17, 18, 19, and 20 June 1979 at the Stouffer Inn Hotel in St. Louis, Missouri.

Donald L. Cooper, M.D. (SIGNED)

May 25, 1979

Mr. Joseph A. Califano, Jr.  
Secretary of HEW  
Hubert H. Humphrey Building  
200 Independence Ave. S.W.  
Washington, D.C. 20201

Dear Mr. Califano:

We the members of the Athletic Medicine Section of the American College Health Association being concerned as the primary responsible providers of health care of athletes at the college and university level and thereby affected by Section 504 of the Rehabilitation Act, have unanimously approved at the meeting of our section on May 24, 1979, the attached resolution as a statement of our concern for the gravity of the situation in which the institutions and team physicians find themselves in complying with this act.

Sincerely yours,  
Major P. Gladden, M.D.  
Chairman  
Section on Athletic Medicine

MPG/er  
attachment

cc: James W. Dille, Executive Director  
American College Health Association  
Isao Hirata, Jr., M.D., President  
American College Health Association  
Executive Board  
National Athletic Trainers Association  
David P. Frelinger, M.D.  
Chairman-Elect,  
Section on Athletic Medicine

Whereas Policy Interpretation No. 5 of the Section 504, Rehabilitation Act of 1973 has been duly published in the Federal Register, Vol. 43, No. 157 - Monday, August 14, 1978, and;

Whereas said Policy Interpretation specifically deals with the Participation of Handicapped Students in Contact Sports, and;

Whereas stated therein "students who have lost an organ, limb, or appendage but who are otherwise qualified, may not be excluded by recipients from contact sports" and;

Whereas stated therein "such students may be required to obtain parental consent or approval for participation from the doctor most familiar with their condition" and;

Whereas the above is in direct contradiction to the "single organ" policy long established by the Joint Commission on the Competitive Safeguards in the Medical Aspects of Sports and the AMA Committee on the Medical Aspects of Sports, as well as the practicing sports medicine field and;

Whereas contact sports, hence uncontrollable injury to the remainder of any paired vital organs can result in:

1. one eye: blindness, legal, temporary or permanent;
2. one kidney: uremia, kidney failure, death or chronic uremia;
3. one testis: permanent sterility and the eunuchoid state;
4. one leg: permanent disability in a sole remaining weight-bearing extremity and;

Whereas accidental injury to any of the above are well recognized as unavoidably associated with contact sports - particularly football, and;

Whereas certain sports present a special hazard to those with potential life threatening disabilities;

Whereas parental consent is no longer required of athletes above the age of eighteen years, i.e., college-age, and;

Whereas physicians "most familiar" with student and parent may not necessarily have any acquaintance whatever with the risks of a vigorous contact sport program;

We, the undersigned, unanimously resolve that the Policy Interpretation herewith under discussion should be thoroughly reviewed and modified. If all sponsoring institutions and team physicians are to be placed at risk for disabilities - in some instances, even death - to a degree far out of proportion to the inevitable risks of contact sports between normal persons, such consequences must also be the direct responsibility of the Department of Health, Education and Welfare by way of said Policy Interpretation.

5/25/79

May 29, 1979

Mr. William H. Chambers  
President NATA  
Department of Athletics  
Fullerton Junior College  
Fullerton, California 92634

Re: American College Health Association Liaison

Dear Bill:

The Athletic Medicine Section of the American College Health Association was held in Washington, D.C., May 23rd and 24th, 1979. I was able to attend all of the sessions as the NATA representative. I am enclosing a copy of the proceedings.

This year's Chairman of the Section was Major Gladden, M.D., of Howard University. David Frelinger, M.D., of Loyola Marymount was president-elect and Evan Ashby, Jr., of Appalachian State was elected president-elect for 1979-80. I was warmly received as our liaison by all three men. They all wanted to know who Jim Dodson was so I think this speaks well for Jim who normally represents us at these meetings. Jim has also been on their program several times. When possible, I believe it would be in our best interest to have him continue as liaison. John Bish, ATC, University of Maryland, spoke at this meeting also.

It was disappointing that only 20 hard-core Section members were there. The meetings were attended by upwards of 150 nurses and other health services personnel. I would encourage all NATA members to get their Student Health personnel involved in this Section. The meetings were excellent, and the members warm and interested in us. I would recommend this meeting to all trainers.

Isao Hirata, Jr., M.D., was the president-elect for the Association. As Team Physician for South Carolina, he definitely presents a high profile within the organization. Interactions with physicians from Oklahoma State, Clemson, South Carolina, North Carolina, Howard, Florida, Indiana, Princeton, Oral Roberts, Amherst, Penn State, Georgia Tech, Cornell and others convince me that these are our type people. They go out of their way to make you feel at home.

I would suggest that information regarding the NATA and Athletic Training be sent to all Student Health Services to better inform them as to our roles. Many of my conversations with members outside the Section indicated the lack of knowledge of our roles and abilities.

In the Athletic Medicine Business Section, they went on record as opposing Interpretations No. 5, Section 504 of the Rehabilitation Act of 1973. They are desirous of the NATA's endorsement of the same (see enclosure 13-3). If the Board endorses this, the Resolution should be sent to David Frelinger, M.D.

I would like to thank you for the opportunity to attend this meeting and the opportunity to serve as our liaison. I would welcome the opportunity to go again should the occasion arise.

Sincerely,  
Joe Gieck, EdD, ATC, RPT  
Curriculum Director  
Head Athletic Trainer

JG:jls

cc: Otho Davis, Executive Director  
The Philadelphia Eagles  
Veterans Stadium  
Philadelphia, Pa. 19148  
David Frelinger, M.D.  
Director  
University Health Service  
Loyola Marymount University  
7101 West 80th Street  
Los Angeles, California 90045

#### AMERICAN COLLEGE HEALTH ASSOCIATION

##### Statement of Concern Regarding Policy Interpretation No. 5, Section 504 of the Rehabilitation Act of 1973

The American College Health Association notes with concern the publication of Policy Interpretation No. 5 (Federal Register, Volume 43, #157, August 14, 1978) which interprets the application of Section 504 of the Rehabilitation Act of 1973 to the question of participation by handicapped students in contact sports. It is noted that "students who have lost an organ, limb, or appendage or have other life threatening disabilities but who are otherwise qualified may not be excluded by recipients from contact sports. However, such students may be required to obtain parental consent and approval for participation from the doctor most familiar with their condition."

It is noted that some institutions of higher education have maintained rules for participation which would exclude persons with one of a paired organ absent from participation in contact sports. For a number of years such exclusion was recommended by national sports medicine committees and organizations. However, in most instances the rule is applied only after exercises of the best medical judgment on the part of physicians responsible for the medical supervision of sports programs. Such medical judgment prior to participation is recognized in the interpretation.

There is concern, however, that the medical judgment of the physician "most familiar with (the) condition" may preclude the medical judgment of the physician responsible for medical supervision of the institution's athletic program. It is urged that judgment regarding participation be made in light of full medical knowledge of the condition of the individual as well as the physical requirements of participation in the athletic program. Such considered judgment would include the physician most familiar with the individual condition as well as the physician most familiar with the physical requirements, conditions, and other aspects of participation.

Further concern must be expressed regarding the potential liability of the institution of higher education should it be forced to permit participation by individuals who should not undertake such participation in the judgment of the physician most familiar with the physical requirements and conditions of the athletic program. To expose institutions of higher education to this liability, in the absence of additional support from the federal

government, is a cause for concern. It must be clear that physicians responsible for athletic medicine programs will require measures which will protect them from potential legal exposure should students participate contrary to their best medical judgment. Institutions of higher education may also seek such protection.

It is urged that Policy Interpretation No. 5 be reconsidered such that the decision regarding participation involve not only parents, students, and individual physicians, but the physician responsible for the medical aspects of the institutional athletic program.

5/7/79

### **XII. AMERICAN CORRECTIVE THERAPY ASSOCIATION:**

It was moved by District 9, seconded by District 7 and carried 10-0, to approve the recommendation of Mr. Jeff Fair as the liaison person with this particular group.

April 9, 1979

Mr. Otho Davis  
Head Trainer  
Philadelphia Eagles  
Veterans Stadium  
Philadelphia, PA 19148

N.A.T.A. Board of Directors:

It is recommended to the Board of Directors that we continue our liaison representative with the American Corrective Therapy Association (approved at the N.A.T.A. Board Meeting February, 1979).

A certified member of the N.A.T.A. needs to be appointed to be in attendance at the 32nd Annual A.C.T.A. Meeting at the Sheraton Portland Hotel, July 9-13, 1979 (possibly Leo Marty, Head Trainer, Portland State University, Portland, Oregon). It is also recommended that he inform the President of the American Corrective Therapy Association of the actions taken on the Recommendations submitted to the N.A.T.A. Board in February, 1979 (copy enclosed).

Respectfully submitted,  
Jeff Fair  
Head Athletic Trainer  
Oklahoma State University  
JF:mh  
enclosure

### **XIII. JOINT COMMISSION ON COMPETITIVE SAFEGUARDS AND MEDICAL ASPECTS OF SPORTS:**

It was moved by District 9, seconded by District 8 and carried 10-0 that the report be accepted as information with approval of continued liaison with this group.

#### **Minutes of The Joint Commission on Competative Safeguards and the Medical Aspects of Sports January 8 - 9, 1979 San Francisco, California**

Members present included:

Roy Don Wilson - National Athletic Trainers Association  
Kermit Smith - National Junior College Athletic Association  
Major P. Gladden, M.D., American College Health Association  
Don Cooper, M.D., American College Health Association  
Carl Blyth, Ph.D., National Collegiate Athletic Association  
William E. Newell, National Athletic Trainers Association  
Jim Dilly, American College Health Association  
Wally Schwartz, National Association Intercollegiate Athletics  
Harry Fritz, National Association Intercollegiate Athletics  
Dennis Poppe, National Collegiate Athletic Association  
John M. Miller, M.D., American College Health Association  
Martz Mortorelli, National Association Intercollegiate Athletics

Associate members present:

William D. Heintz, Dr., American Dental Association

Guest of the joint commission:

Gordy Graham, National Athletic Trainers Association  
Jonathan Bothelo, Health, Education, and Welfare (HEW)  
Ed M. Milner, Monsanto  
Steve Subotnick, Dr., Academy Pediatric Sports Medicine (APA)  
Bill Chambers, National Athletic Trainers Association  
Paul Trickett, M.D., University of Texas

The meeting was called to order by Roy Don Wilson, Chairman, at 1:00 p.m. in the Yorkshire Room of the St. Frances Hotel, January 8, 1979.

The minutes of the June 1, 1978 meeting were approved as presented.

Mr. Jim Dilly gave the Treasurer's report which shows \$655.56 on hand. The report was voted and accepted.

The first speaker was Mr. Jonathan Bothelo, Post Secondary 504 Coordinator, Office of Civil Rights, HEW, discussing the Rehabilitation Act of 1973. (Attachment #1 to minutes) Essentially the interpretation is no discrimination where Federal funds are received. The act means that services offered to the disabled must be of the same quality as other people receive. However, the physician that knows the student best will make the final approval as to whether that handicapped student plays a sport (in cooperation with the parent).

Old business was next on the agenda. Chairman Wilson asked where the money would stay. It was decided to leave it at the home office of ACHA in Evanston, Illinois. Jim Dilly reported that the ACHA is moving to Washington, D.C. this year. There was some discussion about an assessment of each member organization in order to build the Treasurer's account to pay expenses for speakers, rental on equipment, etc. The motion made at a previous meeting was withdrawn and replaced by a motion by Kermit Smith that a regular assessment of \$100.00 be made. This was seconded by Wally Schwartz and voted unanimously. It has been three years since an assessment was made. Also, Chairman Wilson is to contact Vic Raccine about preparing stationary for the committee.

The next speaker was an audio-visual presentation by Dr. Steve Subotnick on the subject "The Importance of Feet and the Pediatrician in Athletics". Listed are some common running injuries: (1) Where there is overuse of the body and stress is evident, don't run. (2) If there is pain around the heel bone, it could be caused by the type of shoe being used. (3) Flat toenails may be caused by tight shoes. (4) Pain on top of the foot may be caused by shoes being laced too tight. (5) If there is arch pain, it could be caused by

pulling of muscle from front to heel of foot. (6) If the foot rolls to the side, use a support to stop this roll. (7) If there is a bunion or toes bent, the shoe may need to be modified. (8) General swelling around the ankle may be caused by runner being out of condition, bad shoes, or overstriding. (9) Shin splints on the inside of leg could be caused by use of toes too much. (10) Knee pain is very common and due mainly to landing on outside of foot, causing knee joint to become unstable. (11) Thigh muscles can be pulled out of shape - increase stride and rest muscles longer. (12) When overstress occurs about the hip, maybe new shoes are needed. See a Doctor or Sports Pediatricist.

Dr. Subotnick says there is an 80% dropout in unsupervised running programs compared to a 20% dropout in supervised running. Stress factors occur where there is lots of motion, high arches, or floppy feet.

Some pre-existing problems to foot trouble are: bunions, hammertoes, keratomas, ankle spurs, and calcaneal spurs.

Dr. Subotnick will not treat the professional athlete while he is active, he will start once the pro career is over. Also, he feels that most foot trouble is caused by two factors: (1) sedentary form of life (2) running on man made surfaces. The high top shoe is recommended mainly to give support to the ankle.

Dr. Don Cooper gave a report from ACHA as he would be at the meeting when this is scheduled. He announced the athletic medicine section will meet on May 23-24, 1979 at the Shorham - Americana Hotel in Washington, D.C.

Roy Don Wilson announced a National Drug Abuse Conference on August 26-30, 1979, in New Orleans (Attachment #2 to minutes)

Executive Session 5:15 p.m.

Chairman Wilson issued a policy statement approved by the Joint Commission on Competitive Safeguards and Medical Aspects of Sports, approved January 6, 1974. (Attachment #3 to these minutes).

Dr. Gladden requested that Chairman Wilson read a suggested resolution by Dr. Isao Hirata of South Carolina in reference to the Rehabilitation Act of 1973. A suggestion was made by Dr. Gladden that a copy of this resolution be sent to Jonathan Bothelo. Pinky Newell recommended the action be postponed until the June meeting as he would like for the ACHA to study this. Dr. Gladden asked that a copy be attached to these minutes. (Attachment #4 to the minutes).

Dr. Don Cooper feels this meeting is well structured and would like to see all the organizations represented.

Meeting adjourned at 5:45.

TUESDAY - January 9

The next speaker was Bill Chambers of Fullerton Community College, California and the President of The National Athletic Trainers Association.

There are 107 Junior and Community Colleges in the state of California. One hundred and four of these have intercollegiate athletic programs. In fact, these colleges have 70% of the enrollment in the state. The tuition is free (at the present). Bill emphasized these colleges are geared toward academic excellence and a diverse area of vocational divisions.

The major funding came from local property tax - this was before proposition 13. Due to this act, four significant changes have occurred: (1) School boards lost lots of local control (2) Lost adult education as free - they must now pay (3) State eliminated summer school support (4) An expected strong de-emphasis on athletics.

Bill presented a paper on a recent survey on "The effects of proposition 13 on athletic training and athletics at the community college level." (See attachment #5)

Kermit Smith asked Bill for a position on the California school joining the NJCAA. It seems they would like to join but can't. At the present time, the teams are restricted to no overnight travel, reduced post-game meal money, money for other expenses, and banquet and awards, event are being cut. Also, if they joined the NJCAA, the travel to Eastern part of the country would be a big problem.

Bill feels the situation is very uncertain at this time.

Mr. Fee DeMers, an attorney, made a talk on "Sports, Safety, and the Law." (Note: He describes an expert as anyone more than 25 miles from home.)

The first duty of a coach is to take a student and treat him fairly - this is usually the law. Most of the cases going to court from athletics are the horribly injured players.

He feels the coaches who are faced with legal actions are the ones that believe "Winning is everything." There should never be abuse to a player, or anything less than the truth in a legal suit. A reminder - athletes that bring legal action against the coach or school, usually don't get well until after the trial.

Some factors to remember: coaches should watch carefully how a player performs the plays. Proper execution is a key to preventing injuries. Also, schools and coaches are responsible for competent officials. Coaches should know the parents and tell them the truth about accident situations. He believes parents are prone to instigate lawsuits, especially in the more serious injuries.

Schools must protect spectators. This is a very serious part of the game.

Another area of great concern is fund raising for the injured player. He believes this is bad. First, it is an emotional experience that serves very little purpose; and secondly, the funds raised can only be a token of the actual expense involved.

In closing, Mr. DeMers emphasized the importance of having a schedule of practice procedures, techniques, and safety practices used in an athletic program. He says too many coaches and trainers are practicing medicine. Do what you know needs to be done and do it well. Also, he believes the "assumption of risk" form will become a vital part of athletics. Attached is a copy of the assumption-of-risk statement of the NCAA. (Attachment #6).

Bill Chambers was asked about NATA and its licensing program. He said the NATA is trying to construct a good bill that will be effective. Their committee will meet with the task force of Physical Therapy Association to try and agree on areas of mutual concern.

Dennis Poppe reported the NCAA activities as he will not be present for the afternoon organizational reports. He indicated a stronger look for the rules committee in reference to blocking below the waist, hip pads, and hand and arm pads. The committee will have more on this after their meeting next week.

Dennis explained briefly the NCAA plans to establish a National Athletic Injuries reporting system among its own members. This should develop more within the next year. Also, they are developing a statement on the disqualification of a player as to who has the right to disqualify. This probably will be transferred from the team physician to the tournament physician in these events. The Big Ten asked NCAA for permission to use shoulder pads the first three days of practice. The NCAA feels this should not be done. They are concerned about the ice hockey face mask and will be looking at CSA standards. Also, will probably donate money to HOCSE for future study. There are



several other areas of concern being studied and this information will be released at the proper time. One is shared responsibility. (Attachment #7)

Dr. Carl Blyth (PhD) will have the eathrophic injuries report for 1978 ready for release in the near future. Carl believes NOCSAE will be stronger as they broaden their scope in testing equipment other than football.

2:00 p.m.

James Glick, M.D., spoke on the subject of "USC of the Arthroscope and what it means to Joint Injuries." His lecture was accompanied by a slide and T.V. presentation concerning certain injuries to a knee joint. This showed filming of the actual operation inside the knee. Many orthopedists do not have this instrument as it is difficult to obtain, plus being costly. However, the lighted 9 tube gives an excellent view inside the knee joint which aids greatly in the operations being successful. Most patients are able to go home the save day of the operation.

Photos were made of an actual operation and shown to this committee on T.V.

The arthroscope shows bad knees immediately and the necessary operation can be performed. This takes the guess out of an operation of probing around the knee.

This apparatus has been used on tennis elbows but the results have not been very good. Also, the ankle and shoulder are being explored.

The operative arthroscope takes out miniscus, loose material cuts structures but it cannot repair. It can be used to treat arthritis, especially in older people. Some benefits of this scope are: (1) immediate rehabilitation (2) little pain (3) no hospitalization (4) and no infection.

The cost of using the arthroscope is about 20% cheaper than a minsectomy. Patients are sent home after an operation with some pain medicine and crutches. Many patients never use either of these.

The next speaker was John Miller, M.D., on the subject of ACE (American Council on Education). A paper is attached as to the purpose of the organization (attachment #8).

ACE is having some funding problems which is the main reason the October meeting was not held. Also, they are in the process of finding an Executive Director.

Various reports of organizations attending were made at this time.

NAIA - Wally Schwartz - Requested that minutes of this meeting be distributed within the next month so they can be used in NAIA meetings. They will be out in two weeks! The NAIA is thinking about having trainer clinics in order to strengthen their services.

NJCAA - Kermit Smith - Major P. Gladden M.D., suggested EMT be used at junior/community college games where trainer and doctor are not available. This appears to be a helpful suggestion and will be explored. There is little indication that the teacher-trainer concept has been advanced within the NJCAA.

ADA - Dr. Bill Heintz - The NCAA does have a mouth protector rule in football and ice hockey. He thinks this would be a good rule for basketball. Also, women should be informed of this. Dr. Heintz says ASTM is not writing rules but is setting voluntary standards. There seemed to be some misunderstanding of this in the minutes of the last meeting.

NEW BUSINESS - 5:00 p.m.

Chairman Wilson asked for suggestions for the next meeting in June. Wally Schwartz suggested we have information from each organization about public issue so we can study them.

The next meeting will be at the NATA convention in St. Louis on June 16 (all day) and 17 (1/2 day), 1979, at Stouffers Riverfront Inn.

The committee expressed appreciation to Roy Don Wilson, Chairman, for a well-planned and informative meeting.

There being no further business, the group adjourned at 5:30.

Kermit Smith  
Secretary

#### XIV. NATIONAL ASSOCIATION FOR GIRLS AND WOMEN IN SPORTS:

The report was noted and there being no action requested, was accepted as information, as follows:

March 6, 1979

Mr. Bill Chambers, President  
National Athletic Trainers Association  
Fullerton Junior College  
Fullerton, CA 92634

Dear Bill:

Thank you for the recent Board of Directors report concerning the National Association for Girls and Women in Sports. Thank you for considering our request regarding computer time. I will attempt to clarify your request regarding the use of certified trainers at national events.

The Association of Intercollegiate Athletics for Women is responsible for the conduct of all national championships for women. NAGWS does not have any direct input in the actual structure and administration of the championships. In the past, the NAGWS Athletic Training Council has made recommendations to the AIAW regarding adequate sports medicine coverage at national events. These comments have been well received. In most cases, the host institution has determined the degree of coverage.

As a result of action passed at the 1979 AIAW Delegate Assembly, a Sports Medicine standing committee was created. The committee's purposes are varied, but the major purpose is to insure proper sports medicine coverage at all national events. I feel that once this committee is organized and functioning, the use of certified athletic trainers at national events will be mandatory.

Thank you for your interest in this area. If I can be of any further help please do not hesitate to contact me.

Sincerely,  
Marge Albohm, Chairperson  
Athletic Training Council

MA/cs

#### NAGWS/NASPE ATHLETIC TRAINING COUNCIL JOINT MEETING

Sunday - March 18, 1979 8:00 a.m. - 12:00  
New Orleans Louisiana

Members Present: Joe Godek, Bud Miller, John Powell, Holly Wilson, Kathy Heck,

Toni VanDePutte, Libby Paine, Marge Albohm, Steve Barnett.

- I. Members of the councils was discussed as well as current program thrusts and philosophies.
- II. History of the councils was discussed as well as current program thrusts and philosophies.
- III. Future Directions
  1. Extensive discussion took place regarding the combining of the two councils. It was felt by both groups that one council could be feasible in the future. However, we felt that we first need to study the organization and structure of a one-council approach. This will be done with the help of the administrative officers of NAGWS and NASPE. At this time, the councils will remain separate and operate as they have been.
  2. Position Statements - It was felt that in the area of position statements endorsement by both councils would be desirable and would give greater strength to the position taken. Any position statement developed by either council will be sent to the Chairperson of the other council for review and endorsement.
  3. Program Planning - Joint program planning was discussed and was determined to be desirable. Bud Miller will work with the GWS Council concerning next year's pre-convention program and Marge Albohm will contact the NASPE Council regarding a joint program during the convention.
- IV. Athletic Training Licensure
  1. Dr. Raymond Salmon, Director of Professional Licensing, state of N.Y., discussed athletic training certification by states. A detailed report of this discussion will be sent to the NATA Committee on state licensure.

I feel that the recent joint meeting was tremendously worthwhile and extremely beneficial to both groups. I personally want to thank all of you for your interest and contributions to the meeting. I know that the members of both councils look forward to working together in the future.

Marge Albohm  
Chairperson, NAGWS  
Athletic Training Council

Another joint council meeting will be held at the NATA National Convention in June at a time to be arranged.

#### XV. NATIONAL ASSOCIATION OF COLLEGE DIRECTORS OF ATHLETICS:

Mr. Chambers indicated the preliminary material was in the book and there was nothing to be done insofar as Board action was concerned. He further indicated that Mr. Young would be liaison to this group and that he would obtain a report relative to their forthcoming meeting. It was moved by District 7, seconded by District 9 and carried 10-0 that liaison with this group be continued.

#### NATIONAL CONVENTION:

Mr. Hoover called attention to the present registration statistics and arrangements for the forthcoming annual convention.

It was moved by District 3, seconded by District 9 and carried 10-0 to accept the convention sites as submitted in the report of June 16, 1979 through 1984.

The convention sites are:

- 1980 - Philadelphia, Pennsylvania
- 1981 - Ft. Worth, Texas
- 1982 - Seattle Washington
- 1983 - Denver, Colorado
- 1984 - Nashville, Tennessee

It was moved by District 3, seconded by District 10 and carried 10-0, that the annual meeting and clinical symposium for 1985 be held at San Antonio, Texas, the dates to be June 8-12.

It was moved by District 6, seconded by District 9 and carried 10-0 to submit Houston, Texas for consideration concerning the 1989 convention.

Mr. Jordan, likewise submitted the nomination of the City of Hartford, Connecticut for the 1988 convention, he offering this in the form of a motion and, there being no second to the motion, the motion died for lack of a second.

It was moved by District 3, seconded by District 9 and carried 10-0, to accept the budget request in the amount of \$5,100 for this committee.

Mr. Hoover, likewise, presented a reimbursement plan for speakers, this to include both NATA members and doctors on the following basis: These speakers to receive \$100 per hour; that if there were four people on a panel, their reimbursement would be based on a pro rata basis of \$100 per hour (each member, for example, to receive \$25 per hour); these individuals to also receive air coach transportation or mileage at seventeen cents per mile, not to exceed air coach fare; plus one night's lodging, including tax, and \$35 for meals and incidentals. Following a question as to the granting of CEU's under this form of reimbursement basis, further action on this matter was tabled pending its presentation for discussion at the various District meetings and for further discussion and/or action of the Board at its Post Convention Meeting.

It was moved by District 5, seconded by District 7 that for the clinical symposium speaker there be waived the registration fee; there be included a banquet ticket for all speakers up to sixteen, except the Schering Symposium and short term speakers. The motion was declared to be carried with Districts 1, 4, 5, 7, 9 and 10 voting in favor; Districts 2, 3 and 8 being against and District 6 abstaining.

#### XVI. MEMBERSHIP:

Mr. Melin called attention to the proposed change in Bylaws to provide for residents of foreign countries to become NATA members in the Affiliate classification. It was moved by District 3, seconded by District 8 to accept the Membership Committee proposal to change the Bylaws and put in the International Affiliate Class into Code 5. Following a brief discussion as to the importance of the change to the NATA and the suggestion that it be referred to the various District Meetings for their thoughts and input, it was moved by District 9, seconded by District 6, carried 10-0, that the matter be tabled until the Board Meeting following the meeting of the Districts.

Attention was called to the loss of Association fees from present student membership fees. It was moved by District 10, seconded by District 4, that the membership fees remain as presently in existence. Following a brief discussion both pro and con, the motion was then voted upon, with Districts 1, 4 and 10 being in favor; and with Districts 2, 5 and 8 opposed to the motion and with Districts 3, 6, 7 and 9 abstaining. The motion was declared to be lost. It was then likewise moved by District 8 to set the student dues at \$15, which motion failed for lack of a second.

It was then requested that Mr. Davis make available figures regarding this matter to the various District Directors for presentation of this matter at the various District Meetings, with the matter again to be brought up at a later meeting.

It was moved by District 1, seconded by District 7, to leave student dues at \$10. Motion carried with Districts 1, 2, 3, 4, 7 and 10 in favor; Districts 5 and 9 against and Districts 6 and 8 abstaining.

## XVII. NATIONAL ASSOCIATION OF INTERCOLLEGIATE ATHLETICS:

There being no action items in this report, it was moved by District 9, seconded by District 6 and carried 10-0, that the report be accepted as submitted.

The report is as follows:

April 24, 1979

TO: Otho Davis, Executive Director, National Athletic Trainers Association  
FROM: Al Ortolani, Liaison Officer for N.A.I.A., Pittsburgh State University  
SUBJECT: Report from Mid-Year NAIA Sports Medicine Committee

In order to speed up matters I'm sending the complete minutes of our last N.A.I.A. Sports Medicine meeting.

Motion #5 might need some explaining. We'd like to organize a trainers association within our own N.A.I.A. framework particularly for the purpose of educating trainers who are not certified and are from schools that cannot afford a certified trainer on its staff. I personally like this idea better than trying to use the services of an EMT specialist at athletic contests. I will also need N.A.I.A. help in setting up trainer symposiums, so as to help the student or graduate assistant (or whatever) who is responsible for the care of the athlete at his or her school.

N.A.I.A. has approximately 535 colleges in its organization and only approximately 65 schools have certified trainers!! This is a serious problem.

Al Ortolani, ATC  
Pittsburgh State University

### MEDICAL ASPECTS OF SPORTS COMMITTEE March 14, 1979

Those in attendance:

Dr. Harry Olree, Harding College  
Al Ortolani, Kansas State College-Pittsburg  
Herb Appenzeller, Guilford College  
Don Spencer, Kansas City, Missouri  
H. C. Palmer, Liberal, Kansas  
Wally Schwartz, NAIA Liaison  
Mertz Mortorelli, Wisconsin-Superior

Olree reported on NOCSAE meetings in Nashville and Chicago.

1. Motion by Ortolani, Second by Spencer - Send helmet checklist to all NAIA football coaches and athletic directors.

PASSED UNANIMOUSLY

2. Motion by Spencer, Second by Palmer - Send "Heat Can Mean Trouble" poster to athletic directors and coaches.

PASSED UNANIMOUSLY

3. Motion by Palmer, Second by Appenzeller - NAIA inform all football coaches and athletic directors that each football player must wear bonifide protective equipment.

PASSED UNANIMOUSLY

4. Motion by Appenzeller, Second by Mortorelli - NAIA News carry an article by Herb Appenzeller on suggested procedures for meeting the requirements of athletes who have lost an organ, limb or appendage and who requested to participate in competitive athletics.

PASSED UNANIMOUSLY

Discussed "Assumptions of Risk Statement," tabled until next meeting.

5. Motion by Olree, Second by Ortolani - NAIA organize an Athletic Trainers' Association.

PASSED UNANIMOUSLY

Dr. Spencer is to check with Mid-West Research Corporation about obtaining funds and conducting a study of the use and abuse of drugs by NAIA athletes.

Recommendation to Athletic Directors Workshop Committee that one session deal with "Preventive Medicine."

Commended President H. C. Palmer on his appointment as team physician to the 1979 World University Games in Mexico.

Adjournment.

## XVIII. NCAA FOOTBALL RULES COMMITTEE:

There being no action items contained in this report, it was moved by District 10, seconded by District 8 and carried 10-0, that this report likewise be accepted as information.

The report is as follows:

TO: Otho Davis, Exec. Director, National Athletic Trainers Association  
FROM: Warren Morris, Athletic Trainer, Certified, University of Georgia

DATE: April 16, 1979

RE: N.C.A.A. FOOTBALL RULES MEETING - Jan. 14-16, 1979, Dallas Texas

The emphasis on the safety of the players was the main point:

No blocking below the waist on a pass interception.

It is an automatic first down and a 15-yard penalty for striking, kicking, butting, spearing, or striking with the crown of the helmet.

Roughing the kicker is a 15-yard penalty and an automatic 1st down.

Hand protectors, (soft casts) made of a silicone rubber, are legal to protect an injury on the hand and wrist. Gloves are legal if they conform with rule 1-4-5-B.

All players must wear manufactured hip pads and these cannot be altered.

Sideline control - It was suggested that only 50 working personnel be in the team area between the 30-yard lines. Doctors, trainers, managers, and coaches must wear a sideline pass. Photographers will be moved back 12 feet outside the team area.

A time out will be charged to a team if a player has to be sent to the sidelines for a jersey change.

Mr. Hal LaHar of the Southwest Conference is the chairman of the committee. Dave Nelson, Athletic Director of Delaware, is the secretary and Dr. James Arnold, Arkansas, is representing the medical aspects.

If any trainer has a rule change to be submitted to the committee, or if anyone has an injury study, I would be happy to accept any data that would be beneficial to the safety of the players and the game of football.

The NCAA Medical Aspects Committee has issued the enclosed sports medicine position statement and the shared responsibility for sport safety. Each player, coach, trainer and institution must accept a shared responsibility.

TO: Hal LaHar, Chairman, N.C.A.A. Football Rules Committee

FROM: Warren Morris - Athletic Trainer, Certified, National Athletic Trainers Association

DATE: January 15, 1979

RE: Report to the N.C.A.A. Football Rules Committee from the National Athletic Trainers Association

The National Athletic Trainers Association would like for this Committee to consider the following suggestions from over 100 different trainers across the country.

The care and prevention of injuries and the safety of each player is our primary concern.

Again this year, we had the most complaints concerning late hits, spearing, etc. We would like to endorse that a disqualification foul be called to help discourage the late hit. This also would help protect the tackler.

We would like to have a quick whistle to protect the quarterback, kicker, ball carrier, and receiver.

A 4th and more than 15 yards is open season on the kicker. We feel that the penalty should be 15 yards and an automatic first down.

There is evidence that the linemen in the trenches are receiving more knee sprains than in the past. We feel that the chop block or clipping in the legal zone may be a contributing factor.

Every year we have players who have fractures of the hand or wrist. The player can play if he has a soft form fitted silicone mold. This protective mold is not abrasive nor does it have any hard or unyielding substance. We need for the committee to legalize this type of protection.

Many complaints still come in concerning mandatory equipment. We need to do a better job of getting the information out to everyone that it is the individual player, coach, and trainer's responsibility to make sure that they have a mouthpiece in when they are playing, that they have manufactured hip pads, thigh pad, knee pads and that they are in their proper place. Torn jerseys not covering the shoulder pad are unsafe for all players and it is the officials' responsibility to make sure that the jersey is covering the shoulder pads and that the number is visible. We see torn jerseys every week.

Sideline control has become a critical area for the team, coaches, managers, and trainers. More and more people (photographers, friends, prospects, alumni, children, etc.) crowd into the team area and make it almost impossible to work. Everyone wants to be on the sideline and be close to the team. This does not allow the working personnel (coaches, managers, trainers, and doctors) to be very efficient. We would like to recommend that the team area be restricted to the team and working personnel only: coaches, managers, doctors, equipment men and trainers, and everyone must wear a working sideline pass.

In order to keep players and coaches out of the six foot white marked area next to the sideline, we feel that moving the chain gang back of the six foot line would help keep the sideline clear for the working officials.

There are always comments on field safety from the trainers. Pad goal posts, fences, benches too close to the sideline, TV cameras, etc that can cause serious injury to the players. We have legislated 1/2 inch short cleats to curtail injuries to the knee and ankle and it has been a tremendous help. We hear complaints that grass two to three inches long causes the players to slip because the cleat isn't long enough to reach the sod. Can we recommend that all fields be cut at 1 inch height.

Safety and prevention of injuries is our main concern and we feel that if the officials will enforce the rules that we have, we will keep this great game of football a safe and exciting one that we all enjoy.

We would like to compliment the officials for their increased awareness of injuries on the field and alertly calling time out.

The N.A.T.A. wishes to thank this committee for allowing us to be here and to commend this able body for its sincere efforts in the prevention of injuries.

## XIX. NATIONAL FEDERATION OF STATE HIGH SCHOOL ASSOCIATIONS:

There being no action required, the report was, by general consensus, accepted as information.

## XX. NATIONAL HEAD AND NECK INJURY REGISTRY:

The Board's attention was called to two articles published concerning this matter, with the Board, upon motion by District 10, seconded by District 3 and carried 10-0, adopting the recommendation to continue with this joint study and to present joint liaison activities.

## XXI. NATIONAL OPERATING COMMITTEE ON STANDARDS FOR ATHLETIC EQUIPMENT:

It was moved by District 2, seconded by District 9 and carried 10-0, to approve the recommendation for continued liaison with this group.

It was moved by District 2, seconded by District 1 to raise the contribution to this group from \$100 to \$500 effective immediately.

Following a brief discussion as to the financial necessity for this increase, the motion was voted upon with Districts 1 and 2 voting in favor, Districts 3, 5, 6, 7, 8, 9 and 10 voting in opposition and District 4 abstaining.

It was moved by District 9, seconded by District 8 that the normal contribution of \$100 to this organization be continued, with the motion being carried by a vote of 9 in favor, zero against and District 2 abstaining.

## XXII. AMERICAN PHYSICAL THERAPY ASSOCIATION:

A report was made to the Board Members as to the present status of the licensure activities with the APTA. Mr. Davis likewise called attention to their present effort to have their own accreditation for physical therapists and the need perhaps for NATA to improve professional help to work in this area in relation to NATA activities. Mr. Chu likewise called attention to the latest report as circulated to the Directors, with then both Mr. Chambers and Mr. Davis adding some of their personal experiences regarding this matter.

A lengthy discussion then ensued as to the activities of the APTA with regard to licensure for physical therapists and the effect of their proposed plan if carried through on credentialing activities of the NATA.

It was moved by District 9, seconded by District 2 and carried 10-0, that the report as presented be accepted.

### STATEMENT OF INFORMATION

As a result of a meeting at the NATA National Convention in June of 1978, between members of the NATA and APTA, both organizations created a "joint task force" to discuss the model legislation which the NATA proposed to introduce at the State level concerning the licensure of trainers.

This joint task force met in Pittsburgh in August of 1978. At this meeting a line-by-line reading and discussion of the proposed legislation was had. The APTA members of the task force gave the NATA members a number of suggestions primarily in the area of the definition of the term athletic trainer and his scope of operation. In addition, suggestions were made as to prohibitive language in the proposed law which prevented a PT from practicing as an athletic trainer. Each group presented its points of discussion with the idea of meeting later and reviewing the progress of the model



legislation.

In February of 1979, the joint task force met in San Francisco. At this time each group showed considerable cooperation and willingness to compromise. The NATA had made several changes in its model legislation to conform with the suggestions of the APTA. At this meeting additional suggestions were made in the refinement of the statute to conform to the wishes of the APTA.

The NATA members advised the APTA members of their wishes to have this model legislation "on the streets" in June. To that end, the members of the APTA task force agreed to present the wishes the NATA task force to its Board of Directors for consideration at their June meeting.

William H. Chambers  
President  
National Athletic Trainers Association  
c/o Fullerton Junior College  
Fullerton, California 92634

Dear Bill:

Thank you for your letter of February 28, and I too enjoyed having the opportunity of meeting you and participating in the meeting of the two Task Forces representing our Associations. I feel that both associations are fortunate in having such outstanding individuals to chair those task forces and I believe their leadership has been a positive factor in the communication between our two organizations. I too am encouraged by the fact that we can sit down and discuss areas of mutual concern, since I believe that is the most appropriate way of resolving these concerns.

I will inform Bob Richardson that you will be sending to each member of our Task Force a copy of the revised model legislation from the National Athletic Trainers Association. This information will certainly be of help to us in our discussion with our Board of Directors in April, and further be of help to Bob Richardson in his upcoming dialogue with our Task Force.

I am uncertain at this time as to what would be the most appropriate time for Bob Behnke and Don Chu to meet with us in Atlanta. I will discuss this meeting with Bob Richardson at our Board Meeting in April and then one of us will be back in touch with you as to whether or not it is appropriate for a meeting at that time. I was in hopes that I could discuss this with Bob prior to my writing to you, however, both of us have been on the go so much that it has been difficult for us to get together by phone.

With best regards,

Sincerely,  
Robert C. Bartlett  
President

RCB: bg

cc: Robert Richardson

March 19, 1979

Mr. Robert Bartlett, President  
American Physical Therapy Association  
Department of Physical Therapy  
Duke University Medical Center  
Durham, North Carolina

Dear Bob:

Enclosed is a letter I sent to Bob Richardson and a copy of the Joint Information Statement. I would appreciate any comments, pro or con, that you might have in regard to this.

Sincerely,  
William H. Chambers  
President  
WHC/nr

cc: Otho Davis  
NATA Executive Director

March 19, 1979

Mr. Robert Richardson, R.P.T.  
St. Margaret Memorial Hospital  
265 46th St.  
Pittsburg, Pennsylvania 15201

Dear Bob:

Because of the interest in the meetings between our two task forces we would like to send out the enclosed as a Joint Statement of Information. If you do not feel the APTA can join us in sending it out the NATA will send it out as a NATA Statement of Information in regard to the aforementioned meetings.

I certainly hope the APTA will join us in getting this Statement of Information to the respective memberships. I would like to know your feelings by March 30th.

Sincerely,  
William H. Chambers  
President

WHC/nr

Enclosure

March 29, 1979

William H. Chambers  
President  
Fullerton Junior College  
Fullerton, California 92634

Dear Bill:

Thanks very much for your correspondence and likewise it was good to meet with you and your task force in San Francisco. I agree that we are moving in the right direction and I hope that we can continue to collaborate in a positive manner.

Bill, at this point, let me comment on your proposed statement of information. As I read it, I find it to be accurate and appropriate for the respective memberships for the purposes of keeping them informed of our activities. The statement really does not speak to the issues which might be problems, but I do not see that as being pertinent at this time because neither of us really have answers to some of these problems which will undoubtedly take time and continued effort to resolve. APTA has several vehicles to communicate this type of information to the membership. One is our Progress Report which comes out monthly and the other being our Component Bulletin which also comes

out monthly. Since I do not have direct control over the content of the Progress Report, I cannot assure you that we can put this statement of information in there line for line as it is written, but I will make certain that we have information which goes out to our membership appraising them of our efforts to date. I am going to a meeting next week and will be in Washington, D.C. and will get a better idea of the alternatives which I will report to you the week of April 9.

With respect to planning the meeting in Atlanta, likewise, I will check with our national staff and will make arrangements for a meeting with Bob Benke and Don Chu.

Our task force will meet later this month and hopefully some direction will ensue from that meeting.

Bill, it was certainly good to see you in San Francisco and I will be looking forward to talking to you the week after next. Please keep me abreast of any other happenings.

Sincerely,  
Robert W. Richardson

RWR/maw

### XXIII. STATE LICENSURE REPORTS:

Brief status reports were given concerning the issue of state licensure in the various states, with all of these reports being accepted as informational, with it being indicated that no action was needed at the present time.

### XXIV. STATE RECIPROCITY:

It was indicated that there were no reports concerning this issue and, there being no discussion by the Board, the matter was accepted with no action.

### XXV. UNITED STATES OLYMPIC COMMITTEE:

Attention of the Directors was called to the Green Book of complete Board Minutes concerning this issue as extracted from the official minutes and the lack of cooperation of the USOC concerning its various statements and commitments made previously and the frustrations of the NATA Board concerning this whole situation, following which it was moved by District 3 and seconded by the balance of the Board and carried 10-0, that the NATA suspend all liaison activities with the USOC Sports Medicine Committee.

### XXVI. SCHERING SYMPOSIUM:

Attention was called to the planned St. Louis program and the functional mechanism used for payment to NATA and subsequent payments to the various speakers. It was indicated that no Board action was required, that this was merely an informational item.

Mr. Davis then further commented upon next year's Schering program to be on biomechanics of the foot. He further indicated that the 1981 program would probably be on the lateral compartment of the knee. Further discussion terminated on this matter after it was indicated that there was no present action needed relative to this matter.

### XXVII. AMERICAN ORTHOPAEDIC SOCIETY FOR SPORTS MEDICINE:

Attention was called to the correspondence regarding this organization. Following a brief discussion concerning the value of the NATA establishing liaison with this group, it was moved by District 9, seconded by District 2 and carried 10-0 that the NATA establish liaison with this group.

It was moved by District 3, seconded by District 7, and carried 10-0, to appoint Mr. Joe Gieck as NATA liaison to this group.

April 20, 1979

Mr. William Chambers, President  
National Athletic Trainers Association  
Fullerton Junior College  
Fullerton, California 92634

Dear Mr. Chambers:

The American Orthopaedic Society for Sports Medicine has welcomed the opportunity to work with the National Athletic Trainers Association. We have asked Dr. Joseph Godfrey of Buffalo, New York, to provide liaison between our organizations. We hope that this will create an opportunity for us to work more closely. I enclose information on what we hope to accomplish in this way.

We trust that you will accept Dr. Godfrey in this capacity. We look forward to hearing from you.

With best regards.

Sincerely,  
Leslie M. Bodnar, M.D.  
Chairman, Section on Public Relations and Liaison

LMB/pgd

Enclosure

cc: Mr. Otho Davis  
Mr. Gene Paszkiet  
Dr. Godfrey

April 17, 1979

The American Orthopaedic Society for Sports Medicine is establishing a Section on Public Relations and Liaison under the Committee on Research and Education. Your participation is requested.

A member of the American Orthopaedic Society for Sports Medicine will be designated to act in liaison with your organization. We would like to offer whatever help we can in our area of interest. We can help in arranging programs, providing information and education on matters pertaining to sports, as they relate to injuries, fitness, conditioning, rehabilitation, etc. You may have study projects in which we may cooperate. There may be problems concerning medical-legal aspects of sports as they pertain to our mutual area. You may desire consultation with our group on a variety of matters including protective equipment, rules for safety in sports, etc. We would like to offer the expertise found in the varied disciplines of which our membership is composed. This is done with the purpose of educating our mutual organizations and their memberships, and for the purpose of improving safeguards and providing care, preventive and therapeutic, to the athlete. Our representative will be asked to coordinate this during his tenure with your organization and our committee.

We would further invite reciprocal arrangements between our organizations inviting you to appoint your own representative, if you so desire, to address our Board of Directors at our annual meeting on any common problems. Such a representative would be invited to attend at your expense. His registration fee at our meeting would, of course, be canceled.

We look forward to your acceptance. When we hear from you, we will notify your organization of the representative we have asked to serve you, and request that he contact you.

Thank you for your cooperation.

Leslie M. Bodnar, M.D.  
Chairman, Section on Public Relations and Liaison  
LMB/pdg

April 26, 1979

Leslie M. Bodnar, M.C.  
Box PR102 Student Infirmary  
University of Notre Dame  
Notre Dame, Indiana 46556

Dear Dr. Bodnar:

Our organization would be happy to have Dr. Joseph Godfrey provide liaison from your organization to ours.

I am happy the American Orthopaedic Society for Sports Medicine wants to work with the N.A.T.A. and we will be happy to jointly work in areas of mutual concern.

I plan to appoint a member of our organization to be our liaison with your group. As soon as I make this decision, I will let you know.

Again, we are happy to have Dr. Godfrey as your liaison to N.A.T.A.

Sincerely,  
William H. Chambers  
President

WHC: jmc

CC: Otho Davis

May 22, 1979

Mr. William H. Chambers, President  
National Athletic Trainers Association  
Fullerton Junior College  
Fullerton, California 92634

Dear Mr. Chambers:

It is flattering to be asked to represent the American Orthopaedic Society for Sports Medicine, to work with your National Athletic Trainers Association, and to be graciously accepted.

As your Association knows, this is a goal we have strived for, and such a liaison can be most beneficial for all concerned.

Your meeting is 16-20 June 1979 in St. Louis and, though the time is short, may I ask if you have suggestions or requests for every action on my part to get this liaison off and running. Perhaps your officers and directors must first approve the actions, and the same may be true of the American Orthopaedic Society for Sports Medicine, but I believe no one of us will stand on formalities.

Appreciatively yours,  
Joseph D. Godfrey, M.D.

JDG: rmo

cc: Mr. Otho Davis  
Dr. Leslie M. Bodnar  
Dr. Jack C. Kennedy  
Dr. H. Royer Collins

#### XXVII. AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS:

Attention was called to the previously submitted report, following which the Board, by general consensus, merely accepted the report as information, pending later discussion with Mr. Paul Grace concerning this organization. Following subsequent discussion with Mr. Grace concerning his feelings regarding the activities of this organization, Mr. Chambers was instructed to write to Dr. Ellison inviting him to appear at the mid-year Board Meeting and explain to the Board his intentions regarding this whole matter.

#### XXIX. SPORTS SAFETY AND HEALTH CARE SOCIETY:

It was moved by District 10, seconded by District 9 and carried 10-0, that the report be accepted as submitted.

It was further moved by District 7, seconded by District 9 and carried 10-0, that this organization not be permitted to use NATA mailings for their promotional literature.

#### XXX. EXECUTIVE DIRECTOR:

It was moved by District 3, seconded by District 9 and carried 10-0, that Mr. Otho Davis be reappointed as Executive Director.

There was also general discussion as to the matter of appropriateness relative to the matter of employment of a full-time Executive Director and whether or not the present financial growth of the organization would warrant this.

The question was also brought up of having more of the various administrative activities concerning the various committees, especially in relation to clerical work, done by the National Office and also the possibility of working in a full-time public relations individual.

#### XXXI. CERTIFICATION:

Attention was called to the prepared report and the recommendations of the committee, with the Board taking the following actions:

1. It was moved by District 8, seconded by District 4 and carried 10-0 to approve the recommendation that the Certification Committee review all avenues of approach to certification with subsequent written statements to be provided the Board to this effect.

2. It was moved by District 2, seconded by District 5 and carried 10-0, to approve the recommendation to accept the report of the Certification Committee.

3. It was moved by District 3, seconded by District 7 and carried 10-0, that the certified public accountant do a cost study and come up with a work salary schedule for secretaries and staff so as to establish a standard procedure of policy for this type of reimbursement in time for further discussion of this matter at the mid-year meeting of the Board, this matter to be left in the hands of the Executive Director for implementation.

A discussion also ensued concerning the matter of the 1800 hour requirement. It was moved by District 5, seconded by District 8 and carried 10-0 that it be recommended to the Certification Committee that they discuss the figure of 1800 hours must be ac-

cumulated with documentation over a six-year period of time and to report back to the Board at its mid-year meeting in January.

It was moved by District 6, seconded by District 8 and carried 10-0 to approve the recommendations as to personnel changes as contained in the report.

March 22, 1979

TO: Otho Davis

FROM: Rod Moore II

SUBJECT: February Board of Directors requests.

(1) Clarification in procedures for certification in regard to length of time needed for individual to get 1800 hours as specified in Section II, Item I.

As it now is interpreted, the 1800 hours must be acquired over a minimum of two years (24 months). Hours may be accumulated for a period of up to ten years. If the hours are accumulated in three years or less, the hours must be documented by the applicant and signed by the supervising certified athletic trainer.

(2) Explanation why test results are so long in getting to people that have taken certification exam. It is the board's understanding that results are supposed to be out in 6 to 8 weeks and in some cases it's taking much longer than this. Why??

The August results were received by the certification office 5½ weeks after the test date. With the employees of this office working full-time jobs we found it very difficult indeed to process that number of candidates expediently. The problem has been remedied as the Administrative Assistant position for the NATA Board of Certification is now a full time position. The January results to passing candidates were received 3½ weeks post-test and were mailed two days later. All candidates will have their results within nine weeks from the test date. Some situations do arise which take considerable review by the Chairman and being new to the position, much time was spent last fall reviewing and consulting in order to react proper and consistent solutions.

April 25, 1979

TO: Board of Certification  
William E. Newell  
Otho Davis  
Bill Chambers

FROM: Rod Moore II

SUBJECT: EDDIE WOJECKI AWARD RECIPIENT

It is a distinct pleasure to announce the winner of the 1979 Eddie Wojewski Award. He is:

John F. Crowe, A.T.,C.  
University of Iowa  
Iowa City, Iowa

Mr. Crowe was certified while a member of District 10 and is presently a member of District 5.

#### XXXII. RICHARD BLACK PROPOSAL:

The Board was introduced to Mr. Richard Black, an attorney from Phoenix, who presented a proposal for the preparation of a two-minute film for television and other public relations uses concerning the use and danger of use of the football helmet for butting and ramming purposes, he further presented the idea that this film could be made with the cooperation of the NCAA and would create the image of the NATA being interested in the wide dissemination of this type of educational material at the high school level and to other audiences.

Following subsequent discussion concerning the benefit to the NATA of it individually doing something such as this, it was moved by District 3, seconded by District 7 and carried 10-0, that further implementation of this matter be left in the hands of the Executive Director, who, with the cooperation of Mr. Malacrea, Director of District 2, would proceed to implement this idea in the most practical manner.

#### XXXIII. SPORTING GOODS MANUFACTURERS ASSOCIATION:

Mr. Chambers called attention to their request for help concerning their political efforts. Mr. Chambers likewise indicated that if this organization desired to become involved with their own congressmen regarding these activities, they could do it on a personal basis, he then indicating there was no action involved in connection with the report and, there being no further discussion, the Board proceeded to other business.

#### XXXIV. SPORTS THERAPY CENTER:

The brief report was received as a matter of information and with no action being indicated.

#### XXXV. MAILING LIST PROTECTION:

Mr. Davis called attention to the correspondence regarding this matter, indicating the loss of revenue to the NATA concerning misuse of these lists, further indicating then he was following up with contacts to all people to whom lists have been sold concerning the misuse of these lists. He further indicated a suggestion involving the Directors as a check on this matter. This matter was then merely accepted as an item of information and action on the part of the Executive Director.

#### XXXVI. ELECTION OF VICE PRESIDENT:

It was moved by District 10, seconded by District 6 and carried 10-0, that Mr. Richard Malacrea be elected to the office of Vice President for the ensuing year.

#### XXXVII. PROPOSITION 13:

Mr. Chambers briefly commented on the present status concerning present procurement of funds in California under Proposition 13, indicating that things were proceeding in a more or less smooth manner, with this report then being generally accepted as informational.

#### XXXVIII. ATHLETIC TRAINER OF THE YEAR:

Attention was called to a letter from Dr. Zimberg to Mr. Davis regarding this matter, with it again being indicated that there was no action to be taken regarding the issue at this particular time.

#### XXXIX. NATIONAL STRENGTH COACHES ASSOCIATION:

Mr. Chambers called attention to his efforts concerning the procurement of further information concerning the formation of this group, this matter at this time merely being accepted as informational.

#### XL. PLACEMENT COMMITTEE:

The Board, after hearing the Chairman's report concerning the activities of this com-



mittee, officially acted as follows:

1. It was moved by District 9, seconded by District 8 and carried 10-0, that members be required to accept the placement lists at the same address used in connection with regular NATA mailings.
2. It was moved by District 6, seconded by District 5 and carried 10-0, that the recommendation of the Committee to allow the sale of advertisements concerning commercial products in the position of vacancy notices be disapproved.
3. It was moved by District 10, seconded by District 9 and carried by a vote of 9 in favor and 1 negative vote (District 3) to adopt item 3 as contained in the committee report.
4. It was moved by District 8, seconded by District 10 and carried by a vote of 7 in favor, one against and two abstaining to approve the budget for the committee, a figure of \$2,925, this budget being minus a figure of \$3,000 requested for office help. (Placement office staff is now being handled by the NATA national office.)

#### XLI. GRANTS AND SCHOLARSHIPS:

Mr. Newell, as a point of information, circulated a new financial statement to the Board members, indicating this was for the purpose of alleviating questions concerning certain phases that had been questioned in the past. He likewise called attention to the committee's necessity of having to file an income tax exemption form, also to the requested budget of the committee as well as copies of news releases concerning all of the student scholarship award winners.

He further called attention to the \$20,000 scholarship fund grant received from NFL Charities, Inc. and also to a \$1,000 of contribution in relation to membership pledges.

It was moved by District 9, seconded by District 10 and carried 10-0, that the report be accepted as presented, together with the approval of the budget as submitted.

The report is as follows:

TO: The Board of Directors  
Otho Davis  
Bill Chambers

RE: Semi-Annual Report - June, 1979

FROM: Committee on Grants and Scholarship

The Committee submits for Board approval the following report of items -

*Item No. 1 - Student Trainer Awards.* On Sunday evening, June 17th from 5:30 to 8:30 P.M., the awards program for scholarship of the N.A.T.A. will be held at Stouffers Riverfront Towers, St. Louis, Mo. The program will consist of a buffet meal, the presentation of awards and informal discussion with students in attendance. Estimated attendance - 350 persons.

*Item No. 2 - Press Releases* were given to all award recipients through THE PHYSICIAN AND SPORTS MEDICINE, THE AMERICAN JOURNAL OF SPORTS MEDICINE, THE AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS plus all trade journals, also N.A.T.A. News releases (news releases are attached)

*Item No. 3 - The Committee thanks the Board for the approval of three new sponsors for the following scholarships this year:\**

William Linskey, Under-Graduate Scholarship, sponsored by Johnson and Johnson

William E. Newell, Under-Graduate Scholarship, sponsored by Chattanooga Pharmacal

Eddie Wojecki, Achievement Award sponsored by Mueller Chemical Co.

*Item No. 4 - The major contributions to the Endowment Fund this year was \$2,000.00 by Mr. Otho Davis and approximately \$1,000.00 from the National Convention Committee over the last three years.*

The Committee is pleased with the fine response received from the general membership.

*Item No. 5 - 1979 Scholarship Award recipients (see attached list)*

*Item No. 6 - Budget requests for 1979-80 (see attached) requests reflects increased printing of nomination folders.*

*Item No. 7 - Discussion and solicitations are ongoing.*

*Item No. 8 - The committee work on Grants and Scholarships is progressing satisfactorily and we have no other report to make at this time.*

\*There are now a total of 6 Undergraduate, four Post-Graduate and one award to the person judged most outstanding on the certification examination.

William E. Newell  
Chairman of Grants and Scholarships

June 7, 1979

Mr. William E. Newell  
Chairman, Grants and Scholarships  
NATIONAL ATHLETIC TRAINERS ASSOCIATION  
3315 South Street  
Lafayette, Indiana 47904

Dear Mr. Newell:

On behalf of the member clubs of The National Football League and the Board of Directors of NFL Charities, it is my pleasure to officially inform you that the National Athletic Trainers Association will receive a grant of \$20,000 from NFL Charities to be used in support of your organization's scholarship fund.

The \$20,000 grant signifies a commitment by NFL Charities to make a \$5,000 contribution to the scholarship fund in each of the next four years. This marks the third straight year a grant has been awarded to the fund, and the four-year series of grants will bring NFL Charities' total commitment to the NATA to \$30,000.

While we're aware and understand your program's limitations in raising of matching funds, hopefully this series of grants will be an incentive to attract additional funding for the scholarship program.

It is my understanding that Al Ward or Joe Rhein of NFL Charities will be in touch with you regarding a public announcement and presentation of the grant.

NFL Charities is again appreciative of the opportunity to join with you in this most worthwhile effort.

Sincerely,  
PETE ROZELLE  
President

PR:LH

cc: Otho Davis, Philadelphia Eagles

March 14, 1979

Mr. J. A. Streed  
Director of Athletic Products  
Johnson & Johnson  
New Brunswick, NJ 08903

Dear Jack:

This letter is to thank you and Athletic Products of Johnson & Johnson for supporting the NATA's newest scholarship award. It is most fitting that Bill Linskey be given this tribute. This award should become one of the highlights of our honor awards banquet.

Bill Linskey has contributed so generously over a span of many years to the enrichment of not only the Eastern Athletic Trainers Association and the NATA memberships, but to the profession of athletic training.

Jack, as an association we cannot thank you enough for this most generous gift. As discussed in our conversation, \$500 will be awarded this coming June with \$500 to be awarded next year.

The honor and prestige which is now being associated with the Student Honors Banquet is most gratifying. In the past, the scholarships have been awarded to persons extremely well qualified by virtue of their educational backgrounds, extracurricular activities and demonstrated abilities and interests. We hope that you will have an opportunity to be present for the awards ceremonies to see the outstanding young men and women being honored.

We are happy you have become a part of our scholarship program.

Sincerely,  
W.E. Newell  
Chairman

Encls. under separate cover

March 13, 1979

William Linskey  
163 Magazine Street  
Cambridge, MA 02119

Dear Bill:

It is with pleasure that I tell you on behalf of the Committee on Grants and Scholarships that the Board of Directors of NATA, through a grant given to the Association by Johnson & Johnson, have approved an Undergraduate Scholarship in the name of Bill Linskey, effective June, 1979.

The Board has taken this avenue of appreciation and thanks as a tribute to a man who has contributed so generously over a span of many years to the enrichment of not only the Eastern Athletic Trainers Association and the NATA memberships, but to the profession of athletic training.

You will find enclosed one of the nomination folders that the students fill out and a copy of the program, from last year's student trainer banquet. We are proud to honor a staunch friend, who had given his time and energy to assisting students of athletic training and the active membership to a higher degree of professionalism.

Sincerely,  
William E. Newell  
Chairman  
Encls. under separate cover

March 9, 1979

Mr. William H. Chambers  
National Athletic Trainers Association  
112 South Pitt Street  
P.O. Drawer 1865  
Greenville, North Carolina 27834

Dear Mr. Chambers:

Thank you for your letter of March 1, and your counter proposal. The purpose of this letter is to confirm that we will be happy to sponsor the William E. "Pinky" Newell Scholarship Award, in the sum of \$500.

Sometime when you have a minute, perhaps you would give more details of the scholarship and how it is presented. We will, as I am sure you know, be exhibiting at the N.A.T.A. meeting in St. Louis. Thus if there is any way in which we can help we would be delighted to do so.

Yours sincerely,  
CHATTANOOGA PHARMACAL CO.  
John H. P. Maley  
President  
JHPM/jg

March 22, 1979

Mr. John H. P. Maley  
Chattanooga Pharmacal Co.  
P.O. Box 4287  
Chattanooga, Tennessee 37405

Dear Mr. Maley:

I am delighted Chattanooga Pharmacal will sponsor the William E. "Pinky" Newell Scholarship Award.

I am forwarding a copy of your letter to the Chairman of our Scholarship Committee, Mr. Newell. He will be in contact with you in regard to how the scholarship will be presented in St. Louis, when, etc.

Again, I am delighted that you will be sponsoring this scholarship. Because of the person it's named for, it is probably our most prestigious scholarship.

Sincerely,  
William H. Chambers  
President  
WHC:jmc

CC: Otho Davis, NATA Executive Director  
William Newell, Chairman of NATA Scholarship Committee

March 27, 1979

Mr. John H.P. Maley  
Chattanooga Pharmacal Co.  
P.O. Box 4287  
Chattanooga, TN 37405

Dear Mr. Maley:

The National Association has much to be grateful to the Chattanooga Pharmacal Co. and to you especially. Through the years your company has been unswerving in support of the athletic trainers. On behalf of the Committee on Grants and Scholarships we welcome your sponsorship of the William E. Newell Scholarship Award and thank you for participating in our program.

Speaking for myself, the job assigned me has many rewarding moments. It is truly gratifying to see the young men and women who are selected to receive the awards each year. Their accomplishments are considered outstanding and they are an eminently qualified group of nominated student athletic trainers.

We are enclosing an award form that you should have filled out that will provide us with a uniform set of statements with reference to your award.

As chairman of the Committee I will report your participation in the Awards Program at the National business meeting in June for inclusion in the minutes.

Your company name and award will appear in the program of the annual student trainer banquet and I would appreciate the opportunity to introduce you or your representative to the recipient at your convenience.

A list of all award winners and the sponsors will be filed with all news services prior to the annual meeting. After N.A.T.A. has released the news of these appointments you may use the information as you so desire.

A copy of our news release will be sent to your desk.

Thank you for your continuing support of the National Athletic Trainers Association. On behalf of over six thousand members we know that you care.

Sincerely,  
William E. Newell  
Chairman  
Encls:

#### NEWS RELEASE

The National Athletic Trainers Association each year awards scholarships to outstanding young men and women who are presently undergoing instruction in athletic training.

Our annual meeting will be held June 16 through June 20 in St. Louis, Missouri and the awards will be made at that time.

The names of the recipients are as follows:

#### 1979 SCHOLARSHIP AWARDS

##### EDDIE WOJECKI 1979 ACHIEVEMENT AWARD

John F. Crowe, A.T.C.  
University of Iowa  
Iowa City, Iowa

Mr. Crowe was certified while a member of District 10 and is presently a member of District 5.

Sponsor - Mueller

##### UNDERGRADUATE SCHOLARSHIP AWARD

Robert Brian Lichtenberger Eastern Illinois University

School Address:  
113 Taylor Hall  
Charleston, Illinois

Home Address:  
Rt. 5, Craig Lane  
Fairfield, Illinois

Sponsor - National Athletic Trainers Association

Lori J. Ferry Lock Haven State College

School Address:  
218A Gross Hall  
Lock Haven, Pennsylvania

Home Address:  
412 Christiana State  
Martinsburg, Pennsylvania

Sponsor - National Athletic Trainers Association

Jeffery L. Owens

School Address:  
Athletic Training Dept.  
Richmond, Kentucky

Home Address:  
2735 Vallery Trails  
Villa Hills, Kentucky

Sponsor - National Football League Charities

##### ROBERT H. GUNN SCHOLARSHIP AWARD

Robert Allan Smodic West Chester State College

School Address:  
South Campus  
West Chester, PA.

Home Address:  
25 Farmhouse Road  
Mountaintop, PA

Sponsor - National Athletic Trainers Association

##### WILLIAM F. LINSKEY SCHOLARSHIP AWARD

Sayers John Miller III Pennsylvania State University

School Address:  
270 Madison Street  
State College, PA

Home Address:  
270 Madison Street  
State College, PA

Sponsor - Johnson & Johnson

##### WILLIAM E. NEWELL SCHOLARSHIP AWARD

Florence Rowena Cottrell East Carolina University

School Address:  
624 Tyler Hall  
Greenville, NC

Home Address:  
Route 3, Box 519  
Louisburg, NC  
Sponsor - Chattanooga Pharmacal Co.

##### LIVING MEMORIAL SCHOLARSHIP AWARD

To be announced.

Sponsor - NATA District Four

##### POST GRADUATE SCHOLARSHIP AWARD

Margaret Mary Shoemaker

School Address:

Box 357  
Allentown, PA  
Home Address:  
174 S. Traymore Ave.  
Ivyland, PA

Sponsor - National Athletic Trainers Association

Rex Lee Sharp

School Address:  
Box 116 - Palmer Hall  
Muncie, IN

Home Address:  
2713 Wahoo Drive  
New Albany, IN

Sponsor - National Football League Charities

Muhlenberg College

Ball State University

##### DEL C. HUMPHREY POST GRADUATE SCHOLARSHIP AWARD

Jean Marie Schulte

West Virginia University

School Address:  
1305 Riddle Ave. Lot #7  
Morgantown, W.Va.  
Home Address:  
837 N. Plymouth St.  
Allentown, PA

Sponsor - Schutt Manufacturing Co.

##### G.E. "MOOSE" DETTY POST GRADUATE SCHOLARSHIP AWARD

R. Richard Ray, Jr.

School Address:  
1800 Washtenaw Ave.  
Ann Arbor, MI  
Home Address:  
6051 Cochise Drive  
W. Bloomfield, MI

Sponsor - PRO Orthopaedic Devices, Inc.

#### NATA ANNOUNCES AWARD WINNER

MAILED: May 7, 1979

Dr. Jack C. Hughston, one of the most highly-regarded, widely-published experts and most sought-after lecturers in the field of athletic injuries and sports medicine, is the recipient of the National Athletic Trainers' Association (NATA) President's Challenge Award for 1979, it was announced this week by NATA's Committee on Grants and Scholarships.

The award is presented annually to the physician who has contributed the most to the advancement of sports medicine in a way that has direct impacts on athletics and athletic training.

Dr. Hughston, who directs the orthopaedic training program at The Medical Center in Columbus, Georgia among his many other affiliations, will be honored at the annual NATA Convention in June, where he will receive a \$1500 grant for either research or education in athletic health care.

In addition to his duties at Columbus' Medical Center, the Florence, Alabama native serves as associate clinical professor in the Orthopaedic Surgery Division of the Tulane University School of Medicine, he chairs the editorial advisory board of THE JOURNAL OF SPORTS MEDICINE of Sports & Medicine Publications, Inc., and he is a member of the Committee On Continuing Education of the American Academy of Orthopaedic Surgeons.

Five of his 15 other memberships are the American College of Surgeons, the American Academy of Orthopaedic Surgeons, the American College of Sports Medicine, the American Board of Orthopaedic Surgeons, and NATA.

The National Athletic Trainers Association presented Dr. Hughston with Honorary membership in 1966 and he has served as national program speaker. Though, he has a busy national and international schedule, he has given attention to the community athletic programs. He underwrites the high school athletic training program at Columbus by subsidizing their salaries. He also provides the medical coverage of all games in the Columbus and nearby Phenix City area through his Clinic doctors. More than twenty five now prominent doctors have taken their orthopaedic residency through his program.

Dr. Hughston's medical association appointments, among others, include orthopaedic consultant for the Auburn University Athletic Association, orthopaedic staff member for the Cripple Children's Division of the Georgia Department of Public Health, membership on the American Medical Association's Committee on Medical Aspects of Sports and two memberships on committees of the American Academy of Orthopaedic Surgeons — its Committee on Sports Medicine, which he has chaired since 1967, and its Orthopaedic Research and Education Foundation, which he has chaired off and on since 1966.

His published articles and speaking engagements on athletic injuries and sports medicine are too numerous to number, but it should suffice to say he remains one of the most noteworthy experts in the field in the United States.

A graduate of Auburn (1938), Dr. Hughston became just that in 1943 at Louisiana State University. He served his internship at Charity Hospital of New Orleans in 1944, and completed Duke University's Orthopaedic Training Program in 1947. In between, he served his country as a captain in the U.S. Army from 1945-46.

The 62-year-old Dr. Hughston and his wife Sarah are the parents of three sons.

#### XLII. AMERICAN COLLEGE OF SPORTS MEDICINE:

Dr. Ken Knight called attention to the activities of this organization involving the initiation of a writing campaign with the American Red Cross to certify a particular course. He then likewise briefly commented on other aspects of his report concerning the activities of this organization, following which, after he answered some brief clarifying questions, it was moved by District 2, seconded by District 4 and carried 10/0 that the report be accepted as information.

#### XLIII. NATA BUDGET AND FINANCIAL REPORT:

Mr. Davis called attention to the figures regarding the NATA budget, indicating that the present new form in which they were being presented would not change the finan-



cial operation of the Association but would more clearly set up the various figures by line items. It was moved by District 3, seconded by District 9 and carried 10-0 to go along with the proposed financial outline as presented by Mr. McIntyre, subject to further subsequent discussion if needed.

#### **XLIV. AMERICAN RED CROSS:**

Attention was called to the American Red Cross proposal regarding an instructional program for the diagnosis, treatment and prevention of sports injuries. Following a brief discussion to the effect that this would have no relationship to NATA activities and the job of the athletic trainer, it was indicated by Mr. Chambers that this matter was merely to be accepted as information at this time and if any of the Directors heard anything further about it, either through telephone or letter correspondence, they were to inform Mr. Davis so that this information could, in turn, be disseminated to the other Directors.

#### **XLV. AMERICAN COUNCIL ON EDUCATION COMMISSION ON COLLEGIATE ATHLETICS:**

Mr. Bobby Barton briefly commented on the activities of this group, indicating his belief that this was a group that required education regarding NATA activities and goals, following which it was moved by District 2, seconded by District 10 and carried 10-0, that the Board approve continuance of the present liaison activities and that Mr. Barton keep Mr. Miller's committee informed regarding the activities of this group.

The report of the American Council on Education's Commission on Collegiate Athletics is as follows:

Summer 1979

TO: Whom It May Concern

FROM: Bobby Barton, District 9 Director

RE: Summer Meeting of the American Council on Education's Commission on Collegiate Athletics

Athletic Representation: NCAA (Division IA, IAA, 2, 3), AIAW, ACC, Big 10, Big 8, Ivy League, MAC, OVC, Pac 10, SEC, WAC, NJCAA, AAU, ACHA, AAHPER, and the NATA

It was my pleasure to represent the NATA at the 1979 summer meeting of the ACE Commission at One Dupont Circle in Washington, D.C. I remain impressed with the distinguished athletic and education administrators that make up the Commission and their obvious interest in our profession. Their continued interest in college athletics in general, and athletic health care in particular, is certainly worthy of our continued attention. After each Commission member was introduced, the meeting was officially called to order by Chairman Joe Nyquist and Director Harry Marmion. The minutes of the June 2, 1978 meeting were briefly discussed. That meeting directed some attention to the college athlete's well-being (other than academic), NCAA reorganization, and the College Athlete's Bill of Rights. A brief summary of the year's developments was given by Chairman Nyquist and Vice President Atwell. The agenda for the 1979 Summer meeting include:

1. *Introduction and welcoming* of Dr. Harry Marmion as the second director of the ACE Commission on Collegiate Athletics.
2. *Call to order and introductions:* Each member was introduced by Dr. Nyquist. Dr. John Miller (I.U.) of the American College Health Association and Bobby Barton (EKU-NATA) expressed the most concern regarding athletic injuries. Dr. J. Neils Thompson from the University of Texas and the NCAA was introduced as a new advisory liaison representative.
3. *Report of Director:* Dr. Harry Marmion has replaced Dr. James Spence as Commission Director. Dr. Marmion reported that the next issue of the *Educational Record* will be directed entirely to collegiate athletics. Several position statements have been presented for the Commission's consideration. (Appendix) Dr. Stan Marshall (NACDA) will circulate the ACE "Athletic Director's Statement" to various members of his association for their perusal. Suggestions for the other statements will be made by the Commission members.
4. *Report on COCA, AAIW and OWNFWA:* George Hanford reported on a May 22 meeting concerning the woman's role in collegiate athletics. There is serious concern that the merger of athletic departments has submerged the women's programs. Women have moved into assistant positions (assistant athletic directors, trainers, SIDs, business managers) and have less responsibility than they did with women's programs. A motion to formally accept Mr. Califano's December interpretation of Title IX was ruled out of order. It was pointed out that since 1976 there has been a 2% drop in the number of women coaches and athletic directors.
5. *Carnegie Study:* Dr. Bob Atwell, V.P. of ACE, reported on the Carnegie Study of Financing Collegiate Athletics. Preliminary results indicate there are extremely few universities with "break-even" football programs and practically no "break-even" total athletic programs. Other findings suggest (a) expenditure patterns and accounting procedures are very inconsistent and often misleading, (b) larger universities maintain a variety of donating mechanisms or channels furnishing additional monies to most 1A and 1AA programs, and (c) student activity fee allotments for varsity athletes present a variety of complex problems. Dr. Atwell's final product will be presented to commission members in the relatively near future.
6. *Athletic Director's Statement:* Several lines of this statement were strongly criticized. The objective of "wide student participation" appears very uncertain at this time. Dr. Marshall will present suggestions to Director Marmion after the upcoming NACDA meeting and before the next ACE Board meeting.
7. *Trustee Statement:* Several changes were suggested for the opening paragraph of this statement. It was generally agreed that items 2 and 7 needed to be re-worked. Dr. Thompson (U. of Texas) agreed to direct his attention to this statement and offer constructive suggestions.
8. *President's Statement:* There was concern expressed for the opening paragraph. The presidents expressed differing attitudes and problems were to be expected at different sized schools. Constructive criticism was invited. Suggestions will be made and forwarded to Dr. Marmion before he sends the statement to the ACE. Dr. Davis (U. of New Mexico) emphasized the different attitudes and personnel management problems that often accompanied major college football and basketball programs.
9. The upcoming issue of the *Educational Record* will devote some attention to Athletic Injuries: A Cause for Concern. Dr. John Miller (ACHA) requested that NAIRS information be given more attention than the HEW injury survey (appendix) that has recently been strongly criticized by various organizations. The NATA representative discussed this issue at length with several members and was requested to have the latest NAIRS report forwarded to the director. The point was well taken that Dr. Califano admitted the HEW survey contained many weaknesses. Dr. Thompson verified that the NCAA was probably going to attempt to take over NAIRS and also hire a *Specialist in Sportsmedicine*.
10. *Available outlines* for discussion were not presented as a great deal of discussion was devoted to topic selection. Selected topics for publication include: "Sports and

the Law," "The Potential Federal Role in Athletics" and "Athletic Injuries: A Cause for Concern."

11. *Future activities of the Commission:* The Commission will probably make recommendations for college athletics that will be based upon the condensation of all previous work. Future projects will be greatly restricted by the amount of money available through a variety of Foundations.
12. *Other business:* Various comments lead to the general agreement that considerable attention must be given to minorities at all levels of collegiate athletics. The reports of several commission members have been tabulated (appendix) and reserved for future consideration. Mr. Dickason expressed concern that the information be published in the most appropriate and useful manner.
13. The next meeting will be in conjunction with the annual ACE meeting. Agenda items will be sent to commission members as soon as they are available to the director.
14. The meeting dates and agenda items will be distributed this fall. Commission members were asked to reserve October 31 through November 1, 1979 as probable meeting dates.

It was a worthwhile experience for me to meet with this outstanding group. I feel strongly that the NATA should continue to be represented on this distinguished commission. I feel our association should take pride in the fact that we now have a permanent invitation. The Commission is interested, pleased and concerned about the serious responsibilities our members perform at their individual universities. I therefore respectfully request Board approval for my travel to the next commission meeting to be held in Washington. At this meeting, Dr. Miller and I will have an opportunity to react to Robert Calvert's recently completed survey of injuries and deaths in athletics.

Respectfully submitted,  
Bobby Barton, A.T., C.

#### **XLVI. AMERICAN ATHLETIC TRAINERS ASSOCIATION:**

Mr. Chambers called attention to the letter from Mr. Bob Moore declining an honorary membership in this organization.

The letter is as follows:

May 21, 1979

Mr. Joe Borland, RPT  
Chairman of the Board  
American Athletic Trainers Association  
and Certification Board, Inc.  
638 West Duarte Road  
Arcadia, California 91006

To The Board of Directors:

I wish to express my appreciation to your group for awarding me an Honorary Membership in your organization. However, I must respectfully decline this honor.

I do not feel that at the present state of development of the Profession of Athletic Training that it is beneficial or judicious to have two National organizations representing Athletic Trainers. The National Athletic Trainer's Association, albeit its weakness, has for over twenty-five years attempted to upgrade the profession through certification and educational standards, etc. At a time when Athletic Trainers are attempting to attain state licensure and are, therefore, being critically evaluated by physical therapy, and other medical and school personnel, it seems inappropriate to lower qualification standards and split the profession.

The avenues of certification and qualification endorsed by your organization do not it seems to me, to be consistent with your stated goals. I believe that the attitude that anyone who wants to become an athletic trainer should be allowed to do so is dangerous to the athlete and non-productive in terms of upgrading the quality of persons who practice athletic training and the experience of the care given athletes by those people.

I see the American Athletic Trainers Association as an attempt to circumvent the more rigorous educational and practice standards set up by the NATA.

For the above reasons I do not wish to have my name or institution associated with the American Athletic Trainer Association.

Sincerely,

ROBERT J. MOORE, PhD, RPT, ATC  
Head Athletic Trainer

RJM/njh

cc: Mr. Bill Chambers

#### **XLVII. NATIONAL ASSOCIATION OF PHYSICAL THERAPISTS:**

Mr. Chambers called attention to the information submitted to the Directors regarding the establishment and efforts of this Association, all of which was accepted, with no formal action being taken by the Board.

#### **XLVIII. NATIONAL GYMNASICS CATASTROPHIC INJURY STUDY PROJECT:**

Mr. Chambers indicated that he saw no further necessity concerning further action on this matter as it had previously been acted upon by the Board, unless there was additional information to be presented.

#### **XLIX. CRAMER COURSES:**

Attention was called to correspondence and ads involving various Cramer courses and their indication that NATA certification credit could be achieved through their passage. The Board took no official action but indicated that Mr. Chambers talk to the official of Cramer concerned with this issue and expressed NATA concerns regarding this matter to him.

#### **L. ENDORSEMENT:**

Mr. Davis called attention to the income to be made by the Association through endorsement of various products, he further calling attention to the discussion concerning this matter by the Board at its Dearborn, Michigan meeting and the financial possibilities offered to the NATA through this means. After attention likewise being called to some of the present and prior feelings by the various Districts regarding this matter, further discussion was terminated, with no further action being taken by the Board.

#### **LI. H.E.W. NEWS:**

Mr. Davis called attention to two H.E.W. booklets concerning athletic injuries and deaths in secondary high schools and colleges by the National Center for Education, indicating the mailing address to which requests for copies could be directed. He further indicated that there was no action to be taken concerning this matter but it was just a matter of information to the Directors.

### LII. RESOLUTIONS OF COMMENDATION:

Mr. Chambers called attention to the Twenty-Fifth Anniversary of District 6, indicating that in this period of time there were three individuals who had attended all of their meetings throughout these many years, then requesting authority from the Board to present resolutions of commendation to these individuals. It was moved by District 10, seconded by District 7 and carried 10-0, that resolutions of commendation be presented to these individuals, together with the stipulation that should such a situation exist in other Districts, that individuals therein would likewise be accorded the same courtesy.

### LIII. NEW ENGLAND SPORTS MEDICINE INSTITUTE:

It was indicated that the matter of the proposed course content had been turned over to the Ethics Committee for its further consideration and action.

### LIV. COMMENTS FROM DISTRICT 4:

Attention was called to these brief comments, with a motion being made by District 8, seconded by District 5 and carried 10-0, to accept these as general information.

Attention was likewise called to the conference being proposed to be held subsequently in Los Angeles with Mr. Jordan expressing his desire that this be included in the minutes and thus leaving it at that particular point.

### LV. UNITED STATES MEDICAL GAMES AND SPORTS MEDICINE CONFERENCE:

Mr. Chambers, as a point of information, called attention to the planned conference of this group to be held in Los Angeles, indicating this was merely a matter of information and no further action was necessary.

### LVI. UNITED STATES WOMEN'S LACROSSE ASSOCIATION:

Mr. Jordan called attention to the various difficulties expressed by this group concerning the wearing of the necessary player regalia. After indication that there was nothing that this Board could do about these issues, it was moved by District 5, seconded by District 6 and carried 10-0, that Mr. Jordan refer this correspondence relative to these issues to the AIAW.

### LVII. JOURNAL:

Mr. Compton called attention to the suggestion made to the Journal Committee that possibly at some future time and in some future issue there may be included the picture of a girl or woman on its cover.

He further reported upon the results of the last writing contest, indicating the contest would be continued and that perhaps more specific information should be given to the students in order to guide them in the preparation of their papers in the future.

A discussion concerning articles submitted for the section called "Tips From The Field" brought forth the comment that this more or less involved things that could be written as Journal articles and that this should be separated at some point in time. He further commented on various difficulties involved regarding publication of the Journal until the new Editor-In-Chief assumed the responsibility.

It was moved by District 9, seconded by District 7 and carried 10-0 to accept the student writing report.

It was further moved by District 9, seconded by District 8 and carried 10-0, to accept the report as given by Mr. Compton.

It was moved by District 6, seconded by District 5 and carried 10-0, to accept the resignation of Mr. Compton.

A discussion as to a replacement for Mr. Compton took place, with several names being submitted as recommendations and with the matter being left that these particular gentlemen would be contacted and a report made to the President and the Board would then proceed from that point in making the final appointment.

It was moved by District 9, seconded by District 10 and carried 10-0, to accept the report concerning the Journal as written by Mary Edgerley.

### LVIII. CONSTITUTION AND BYLAWS:

Mr. Melin called attention to the proposed change concerning the term of President and matter of election, indicating the procedures that would be followed at the business meeting and the action to be taken by the Board at its subsequent meeting if the proposed change were passed. At a subsequent session of the Board, attention was called to the adoption of the new Bylaws provision concerning the election procedures for the office of President, with Mr. Melin then presenting, under the new terms of procedure, the names of those eligible.

Following a lengthy discussion and enumeration of these eligible to be nominated for this position during the ensuing year, various members were asked to contact certain individuals. A subsequent report was forthcoming concerning the reply from these individuals concerning their desire to run. The Directors, after listening to these replies and the indication that only Mr. Bill Chambers and Mr. Larry Standifer were interested in running for the ensuing term, approved these two individuals as candidates, with instructions to Mr. Davis to follow up concerning the Bylaws provisions with regard to mail ballot elections.

### LIX. UNITED STATES PHYSICAL THERAPY ASSOCIATION:

Mr. Chambers called attention to a letter from Alex C. Krostenko, President of the United States Physical Therapy Association, indicating that before the Directors of NATA came to a decision to have model legislation with the APTA, that he would advocate strongly that the NATA pursue other avenues of joint effort, he indicating that at present the APTA was only one of three physical therapy associations in the United States. By common consensus, further action was postponed on this issue by the Directors until all concerned could be heard from.

### LX. AAHPER:

Mr. Miller called attention to the previously report, indicating that positive action was now being taken to get those groups involved in working together. He also called attention to the special program to be put on for certified members, this program presently planned to be held on the day before the National Convention. He indicated that this was merely an informational report, following which it was moved by District 9, seconded by District 10 and carried 10-0 to accept this report as informational.

It was further moved by District 9, seconded by District 10 and carried 10-0 to continue liaison with this group.

### LXI. PROFESSIONAL EDUCATION:

Mr. Miller called attention to the previously submitted report, with the Board then acting as follows:

It was moved by District 2, seconded by District 6, carried 10-0, to approve items I through V of the committee report.

It was moved by District 9, seconded by District 2 and carried 10-0, to accept items VI, VIII, and IX as general information.

It was moved by District 7, seconded by District 2, to approve item VII concerning

the two conferences, with the notation that in the future when the Education Committee desires to have these types of meetings, they have to receive Board approval prior to them being scheduled.

It was moved by District 2, seconded by District 6 and carried 10-0, to approve the proposed budget for the Education Committee.

A discussion then ensued as to the possibility of having a moratorium on the pursuit of further training programs until statistics concerning the job employment market were presented and analyzed.

It was moved by District 7, seconded by District 3 that based on NEA statistical data released at the National Convention in Dallas, Texas, to be updated by the NATA membership survey, that it be recommended to the Professional Education Committee that they notify all curriculum program directors they advise their students about the job market and job potentiality in relation to physical education and that this information likewise be included in relation to the updated guidelines. The motion was declared to be carried with District 1 being in opposition and District 4 abstaining.

Mr. Redgren then called attention to item XI of the report of the Continuing Education Subcommittee for clerical secretarial assistance.

It was moved by District 5, seconded by District 7, that Section O of the Section on Continuing Education be dropped as of June 19th. The motion was declared to be carried with Districts 1, 2 and 9 being in opposition and District 10 abstaining.

It was moved by District 9, seconded by District 2 to accept Plan B of Item XI of the Professional Education Committee's report. Motion carried 10-0.

It was moved by District 9, seconded by District 8 to appropriate a sum of \$8,000 for the purpose of getting all CEU material up to date and ready for entry on the computer. The motion was carried with nine in favor and one abstention, the abstention being District 6.

It was moved by District 8, seconded by District 5, to accept Jack Redgren's report circulated to the members of the Board upon their arrival as information. The motion was carried 10-0.

### LXII. ETHICS COMMITTEE:

Mr. Diehm, in reporting for the Ethics Committee, emphasized the request for replacement of Stan Rollinson. He further indicated there was presently in process the revision of the Code which will be given to the Board in ample time for it to review and for hopeful approval at its mid-winter meeting. Legal counsel further discussed the efforts of the committee to provide in the Code regulations governing the matter of solicitation, indicating that something would be presented at the January Board Meeting.

A general discussion ensued at this point concerning the matter of the present status of sports medicine clinics and the item of definition of "solicitation" and "athletic trainer".

It was moved by District 2, seconded by District 3 and carried 10-0 to approve the composition of an ad hoc committee consisting of Mr. Diehm as Chairman, Mr. Larry Graham (attorney) and Mr. Bob Barton, Mr. Don Chu and Mr. Bob Behnke to study and address the issue of what is an athletic trainer as it relates to the NATA, what is the definition of "solicitation" as it relates to the NATA and to further address the definition of the setting of the athletic trainer working in a clinic type of situation, whether or not covered by state law licensure, etc., with a report to be hopefully presented at the January 1980 Board Meeting.

Mr. Diehm again called attention to the present rules governing the use of the NATA logo on business cards, brochures and other materials of the Association, urging the Directors to again disseminate this information to their various District members.

It was moved by District 6, seconded by District 7 and carried 10-0 to approve the appointment of Larry Standifer to the Ethics Committee in place of Ken Rawlinson.

It was likewise moved by District 5, seconded by District 2 and carried 10-0 to approve the report as submitted by Mr. Diehm.

### LXIII. PROPOSED BY-LAW CHANGE:

It was moved by District 10, seconded by District 2 and carried 10-0 to accept the proposed change in the Bylaws concerning Article XXVI relative to membership provisions and the dues to read: "A person who is once certified as an athletic trainer remains certified as long as he or she meets the minimum requirements for continuing professional education and maintain continuous certified membership and only as long as said two requirements are met."

### LXIV. ESTABLISHMENT OF MEMORIAL RESOLUTION COMMITTEE:

It was moved by District 8, seconded by District 6 and carried 10-0, to approve the establishment of a new Memorial Resolutions Committee as presented.

It was also moved by District 5, seconded by District 9 and carried 10-0 to approve Mr. Jim Rudd from Kansas State University as Chairman of the new Memorial Resolutions Committee.

### LXV. MEMBERSHIP:

A discussion ensued relative to a change in the Bylaws so that International Affiliate Membership would be put in Code V. It was moved by District 5, seconded by District 6, to adopt the International Affiliate Membership in Code 5, with a membership fee of \$50. The motion was carried with eight in favor, two in opposition with Districts 1 and 2 being opposed.

### LXVI. RESEARCH AND INJURY:

Mr. Powell called attention to the recent distribution of the HEW injury survey and to some of the misinterpretations concerning this survey and also some of the positive things that could be interpreted therefrom.

He further commented upon a summary and conclusion section from the document that the NAIRS program had submitted to the Consumer Product Safety Commission in February of 1969 and also discussed other programs and efforts and grant documentation concerning programs and participation by other athletic organizations. He further discussed the present status of the NATA membership survey by Phil Donley and its present status within the committee.

It was moved by District 3, seconded by District 2 to accept the report of the Research and Injury Committee, which motion was carried 10-0.

### LXVII. NAIRS:

Attention was called to the \$1600 request for attending five different meetings. It was moved by District 8, seconded by District 2 that the Research and Injury Committee be given a sum of \$800 to be used at their discretion to promote NAIRS projects. The motion was carried with a vote of 8 in favor and 2 in opposition, the opposition being Districts 6 and 7.

### LXVIII. ADJOURNMENT:

There being no further business, the meeting of the Board was adjourned.



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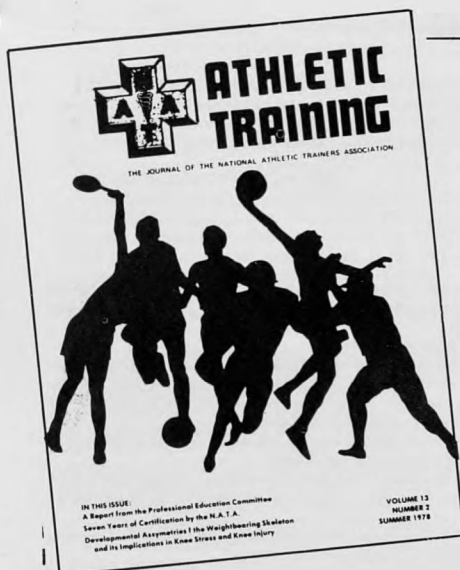
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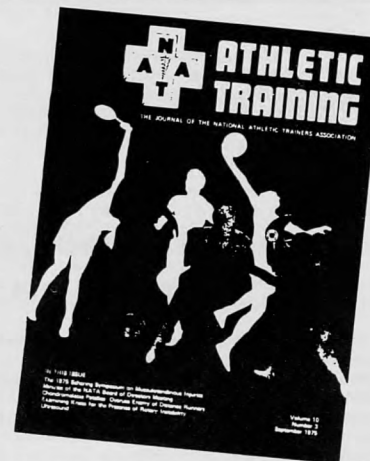
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# PROCEEDINGS of the NATIONAL ATHLETIC TRAINERS ASSOCIATION

## ANNUAL BUSINESS MEETING

June 18, 1979  
Stouffer's Riverfront Hotel  
St. Louis, Missouri

### MONDAY MORNING SESSION

June 18, 1979

The 1979 NATA Business Session was called to order at eleven o'clock a.m., Mr. William Chambers, President, presiding.

**PRESIDENT CHAMBERS:** I would like to call to order the 1979 Business Meeting of the NATA.

To open our meeting, I would like to have the opening invocation to be given by Ken Murray.

Will you all please stand.

**MR. MURRAY:** Let us pray.

Dear God, we thank you for this day. We thank you for the opportunity we have as trainers to work with men and women and help their bodies.

Be with us now as we start this meeting. Watch over us and help us to have clear minds, in Jesus name we pray. Amen.

**PRESIDENT CHAMBERS:** Thank you, Ken.

I would next like to ask for a motion to dispense with the roll call.

... It was moved by Mr. Joe Godek and seconded by Mr. Joe Blankowitch and unanimously carried that the calling of the roll be dispensed with...

**PRESIDENT CHAMBERS:** The next item concerns the 1978 Business Meeting minutes, and inasmuch as these minutes were published in the Journal, I would ask for a motion for the approval of these minutes without reading.

... It was moved by Mr. Joe Abraham, seconded by Chuck Demers and unanimously carried that the 1978 Business Meeting minutes be adopted without reading...

**PRESIDENT CHAMBERS:** Now I would like to recognize Otho Davis to present to us the Treasurer's report for the fiscal year 1978-1979.

... At this point, Mr. Davis presented a detailed review concerning assets and liabilities of the Association for the fiscal year ending in June of 1979...

**PRESIDENT CHAMBERS:** Thank you, Otho.

May I have a motion to approve the report of the Treasurer.

... It was moved by Mr. Ted Quendenfeldt, seconded by Jack Redgren and unanimously carried that the report of the Treasurer as presented by Mr. Davis be approved...

**PRESIDENT CHAMBERS:** Now, at this time, we will have the report of the Executive Director concerning the actions taken at our first meetings of the Board of Directors prior to this meeting.

... At this point, Mr. Davis read a prepared summary of actions prepared by the stenotypist concerning items discussed and acted upon at the pre-1979 Business Meeting by the Board of Directors...

**PRESIDENT CHAMBERS:** Thank you, Otho.

I would like to, at this point, remind the membership that if you have any problems or questions concerning any of our Board actions, please discuss them with your District Director because any time these are to be brought before the Board of Directors they have to be submitted by your respective District Directors.

At this time, I will entertain a motion for the acceptance of the Executive Director's report as just presented. Do I have a motion to that effect?

... The motion was made by Mr. Paul Grace and seconded by Dennis Sealey and, there being no further discussion, was voted upon and declared to be unanimously carried...

**PRESIDENT CHAMBERS:** At this time we will have the special committee reports and the first item of business will be our memorial resolutions.

These are presented by each District for inclusion in the official minutes and they will be published in the Journal.

The ones we have from District 2 are: Fred Holmes, Princeton, New Jersey; John Deni of Pittsburgh, both of which have appeared in the Journal.

For District 5 we have Ken Rawlinson, Oklahoma University, which likewise has appeared in the Journal.

For District 8 we have Robert Hand from Pomona, California.

I would like to have you at this point stand in a moment of silence for these deceased members during the past year.

... The membership arose in a moment of silent tribute...

**PRESIDENT CHAMBERS:** At this time I would like to call upon Porky Morgan from Kansas State University, to announce the Twenty-five Year Award recipients. The formal presentations of these awards will take place tomorrow night at our Honor Awards Banquet.

... At this point Mr. Morgan announced the names of Don Fauls, Florida State University; Tom Healion, of the New England Patriots and Mike Linkovich of Bowdoin College as the Twenty-five-Year Award recipients...

**PRESIDENT CHAMBERS:** Thank you, Porky.

I would like to call on George Sullivan at this time to announce the Honorary Award recipients and the Citizens Savings Athletic Foundation Hall of Fame inductees and, again, formal presentations will be made tomorrow night at the Honor Awards Banquet.

**MR. SULLIVAN:** This year's Hall of Fame awards winners will be Robert Weingart



from District 4, and Byron Bird from District 5. These were two that were taken out of a number of six which were voted upon.

Honorary Membership will go to Robert Clinger of District 4 and Dr. Tom Coker of District 6.

**PRESIDENT CHAMBERS:** Thank you, George.

At this time I would like to have Jim Cody come forward.

Let me say that Jim Cody has a presentation to make. As you know, he is with the Kwik-Cold Division of Kay Laboratories and would like, at this time, to present the President's Challenge Cup Award, which involves a \$1500 grant and an original work of art. Again, the recipient will be announced at the banquet tomorrow night.

**MR. JIM CODY:** Bill, in behalf of Kay Laboratories, we really enjoy working with this group and we hope that we can continue this and I think we all have the same purpose and the same thoughts in mind. We appreciate this group very much. Thank you. (Applause)

**PRESIDENT CHAMBERS:** Thank you, Jim.

I would now like to ask Rod Moore from the Certification Committee, to announce the winner of the Eddie Wojewski Scholarship Award.

**MR. MOORE:** Thank you, Bill.

It is always a distinct pleasure for the Chairman to announce this award because this signifies the highest achievement on the certification examination during the past year.

This year's winner is Mr. John F. Crowe, who is now Assistant Trainer at the University of Iowa. He is a graduate of the University of Washington and is a native of Washington. Again, this award will be presented tomorrow night at the banquet. (Applause)

**PRESIDENT CHAMBERS:** Thank you, Rod.

At this time, Mr. Pinky Newell will announce the winners of the NATA Scholarship Awards.

**MR. NEWELL:** Each year the NATA awards scholarships to outstanding young men and women who are presently undergoing instruction in athletic training. I offer these names for inclusion in the minutes.

The Student Trainer Banquet was held last night and I would like to thank District 9, the host District, and especially Jeff Daniels, awards coordinator, for a beautiful evening.

The 1979 Scholarship Awards winners for the Undergraduate Scholarship Award are Robert Bryan Lichtenberger of Eastern Illinois University; Lori J. Ferry, Lock Haven State College and Jeffery L. Owens of Eastern Kentucky University.

The Robert H. Gunn Scholarship Award winner is Robert Allan Smodic of West Chester State College.

The William F. Linskey Scholarship Award winner is Sayers John Miller, III, of Pennsylvania State University.

The William E. Newell Scholarship Award winner is Florence Rowena Cottrell of East Carolina University.

The Living Memorial Scholarship Award sponsored by District 4 of the NATA went to Alice McNeill of Ohio University and District 4 has approved for next year another scholarship award, thus giving them two.

The Postgraduate Scholarship Award winner was Margrit Mary Shoemaker of Muhlenberg College and Rex Lee Sharp of Ball State University, with the first award sponsored by the NATA and the award given to Mr. Sharp sponsored by the National Football League Charities.

The Del C. Humphrey Postgraduate Scholarship Award went to Jean Marie Schulte of West Virginia University. This, as you know, is sponsored by the Schutt Manufacturing Company.

The G. E. "Moose" Detty Postgraduate Scholarship Award went to R. Richard Ray, Jr., of the University of Michigan.

Thank you very much.

**PRESIDENT CHAMBERS:** We have a special guest here today that somewhat ties in with our scholarship awards and it is with a great deal of pleasure I introduce Mr. Joe Rhein of the National Football League Charities. He is here representing Commissioner Pete Rozelle of the National Football League and at this time Joe has a presentation to make.

**MR. JOE RHEIN:** Thank you, Bill.

Good morning. It is a pleasure to be here in behalf of the Commissioner, Pete Rozelle, and the twenty-eight clubs of the National Football League, we would like to extend the League's appreciation to the members of the NATA for all the work you do. We also thank you for all of your past courtesies and cooperation and we hope that our fine relationship with you will continue into the future.

We are having a little cocktail party in your honor over at the new Marriott Pavilion Hotel, which is a block from here, from six-thirty to eight o'clock and we hope you all can come.

We also have another purpose for being here today, one quite important to the Commissioner, and this also involves the National Football League Charities and its involvement with the NATA Scholarship Fund.

NFL Charities is a young organization, formed five years ago by the clubs as a means by which they collectively could make grants to worthy organizations on a national level. It is run by a seven-member Board of Directors that is funded by the income generated from the sale of NFL licensed merchandise. The proceeds of that merchandise, instead of being turned back to the clubs, is, in turn, given to NFL Charities.

In the past five years, NFL Charities has given more than \$1.5 million in grants to groups, primarily in the area of education, medical research and recreation.

Some two years ago, NFL Charities received a letter from Pinky Newell making inquiry regarding their assistance into the Trainer Scholarship Fund. This letter led to a \$5,000 grant going to the Scholarship Fund for the past school year.

We are here to make the presentation of the second \$5,000 grant to the Scholarship Fund. Also, before we make the presentation today for this coming school year, we would like to say one more thing and that is that since our association with this group began with a letter from Pinky, it was fitting that he give us a progress report on last year's scholarship grants and at one paragraph in the end of the report, Pinky noted that the goal of the Scholarship Committee was to in essence get a thousand dollar grant per club in the NFL.

This letter was, in turn, presented to the Board at last week's meeting and we are pleased to say today that NFL Charities made a four-year pledge totaling an additional \$20,000 to the fund, which will bring our total commitment to \$30,000.

... Rising applause ensued ...

At this time, if I might, I would like to ask Bill Chambers to step forward. Bill, please accept this check in the amount of \$5,000 for the 1979-1980 Scholarship Fund. (Applause)

**PRESIDENT CHAMBERS:** Thank you very much, Joe. We certainly appreciate the generosity of NFL Charities and it is certainly a great honor to be able to accept the check and a great honor for the Association to be able to be a part of this year's work.

Now, at this time, our Executive Director, Otho Davis, has some individual awards to make and then he will also announce the sites for the various District meetings.

**MR. DAVIS:** The first individuals we would like to recognize are our outgoing Directors.

District 3, we have Herman Bunch, the award and plaque to be accepted by Andy

Clawson.

The next award is to be presented to Larry Standifer, District 10.

The Vice President's plaque for last year's Vice President goes to Cash Birdwell. (Applause)

We will next recognize our Journal Committee for the work they have done.

... Whereupon, individual plaques were presented to the various members of the Committee ... (Applause)

**MR. DAVIS:** We would now like to pay honor to the workers on our National Convention Committee, those individuals who put together this 1979 Clinical Symposium and Convention.

... Whereupon, the members of the Convention Committee were likewise individually presented with plaques ... (Applause)

**MR. DAVIS:** With regard to the various sites for the District meetings, they are in your program. However, we will mention them.

The time is from five to six p.m. today.

... Whereupon, at this point, Mr. Davis mentioned the various locations for the District meetings ...

**PRESIDENT CHAMBERS:** Thank you, Otho.

At this time, I would like to recognize our 1978-1979 Board of Directors. These are the individuals that have put in a lot of work, have been very dedicated and spent a lot of time at various meetings.

At this time I would like to express my thanks to them for all of their fine work and also let you, by their introduction, see who has been doing work for the Association.

From District 1, we have Wes Jordan from the University of Maine. (Applause)

From District 2, Dick Malacrea of Princeton University. (Applause)

From District 3, Herman Bunch from Raleigh, North Carolina. I understand that he had to leave.

From District 4, Gordon Stoddard from the University of Wisconsin. However, as you know, Gordy has been sick this year and unable to be here and so representing him at the meeting of the Board of Directors has been Bob Behnke of Indiana State University. (Applause)

From District 5, Frank Randall from Iowa State University. (Applause)

From District 6, Cash Birdwell of Southern Methodist University. (Applause)

From District 7, Troy Young from Arizona State University. (Applause)

From District 8, Don Chu from California State University at Hayward. (Applause)

From District 9, Bob Barton of Eastern Kentucky University. (Applause)

From District 10, Larry Standifer from the University of Oregon. (Applause)

We will also have three new members coming on to the Board of this year.

From District 3 we will have Andy Clawson from The Citadel.

From District 6 we will again have Cash Birdwell of Southern Methodist University.

Then, from District 10, Gary Craner of Boise State. (Applause)

At this point I would like to ask if there is any new business to be brought before the National Business Meeting. Will you state your name and where you are from.

**MR. ROBERT BURKARDT:** In 1976, the membership unanimously adopted a motion to, at the beginning of these business meetings each year, say the Pledge of Allegiance. I would like to know why we started our meeting out without doing that and with especially an American flag not being present and whether or not it was merely an oversight.

I think we should again be reassured that this procedure will be followed in the future.

**PRESIDENT CHAMBERS:** Let me say that was an item on my agenda. However, I felt that inasmuch as there was no American flag in this room and I did not know which way to face, we decided not to do it this time. However, it will be done in the future but there was no flag in here when we started and that is the reason it was not done.

Is there anything else?

Well, okay.

You have all received in the mail a communication from our Executive Director, Mr. Davis, dated May 16, 1979 and the Board of Directors has proposed a change in the time for the election of President and in accordance with a Constitutional provision for a change in the Constitution, I hereby inform the voting members that for the proposal to be adopted, it has to be read at this meeting and voted on by at least two-thirds of a majority of the people present at the National Business Meeting.

The essential change in the Constitution, if the proposal is adopted, is to make the dates of the Presidential process earlier so that the President-elect will be chosen well in advance of his term of office and so that the President-elect can become better acquainted with the responsibilities of the office.

There are certain minor changes in the wording of the paragraph relating to the Vice President, merely for the purpose of including clarity.

The proposed change is that the present Section 3 of Article VIII, Organization of the NATA Constitution shall be completely deleted and a new Section 3 shall read as follows:

This will be headed "Article VIII, Organization, Section (a) President:"

"The President shall be elected by a majority popular vote of the voting membership of the National Athletic Trainers Association. The Board of Directors shall be the nominating committee. Candidates must have served on the Board of Directors some time during the four years immediately preceding the meeting at which nominations are made. Two candidates shall stand for election in one year before the end of the term of the current President. The biography of each candidate shall be published in the fall issue of the Journal of the NATA Athletic Training following the nominations

"The membership voting shall be by mail. A ballot shall be mailed to each voting member at his/her address of record by November 15 and the marked ballot must be returned by mail to the Executive Director at the designated address and be postmarked no later than December 1.

"The term of the President shall be two years and he/she may not serve more than two consecutive terms. The term of office shall begin at the Business Meeting of the Association at the Annual Meeting and Clinical Symposium following election."

We next go to Section 3 (b) Vice President, which is proposed to read as follows:

"The District Director from one of the ten Districts shall be elected to the office of Vice President by the Board of Directors. One or more District Directors may be nominated by members of the Board and election shall be by majority vote.

"The Vice President must be a District Director, also. If the Vice President ceases to be a District Director, a new Vice President must be elected.

"The term of office of the Vice President shall be one year and he/she may be reelected.

"If the office of President becomes vacant before the end of the term for which the President was elected, the Vice President shall become President immediately and shall serve as President for the remainder of the term for which the previous President was elected. In the event that the President-elect is unable to assume the office of President, the Vice President shall become the President-elect and then become President at the beginning of the term for which the original President was elected, and serve for a full term. It is therefore possible that a Vice President could serve a partial term as president followed by a full term. In such circumstances, a President shall be eligible for nomination and election for one consecutive term following the first full term.

"The Vice President has no Constitutional duties other than to assume the office of

President or President-elect as prescribed."

Now, having read this, in accordance with our Constitution, I would entertain a motion to accept the Constitutional change as read.

... At this point, it was severally moved and seconded that the above proposed changes be adopted and, there being no discussion, the motion to adopt the two changes was voted upon and was declared to be unanimously carried...

**PRESIDENT CHAMBERS:** Thank you very much.

Now, the last thing I would like to do is that I would like to just make a few general comments about some of the things that are going on in the Association and just try to bring you up to date on a few things and also give you my ideas of things as I have seen them for the past year.

The first item is with regard to our Continuing Education Units.

I think all of us, if we would read the instructions and not panic, that things would go much more smoothly. Granted, we have some rough spots to smooth out and we are going to do that. However, keep in mind we have talked about it for a long time but have only had it in the process insofar as Continuing Education is concerned for one year and so there are going to be some bumpy spots.

However, I would encourage you, if you have any questions and some concerns, to read the instructions sent to all of you and keep in mind that we are only human and that there are going to be some bumpy spots. However, I am sure we will get those adjusted as we go along.

I would also like to mention the Professional Education and Journal Committees because they are certainly doing a lot of work for the Association and, in particular, I would like to say that the latest issue of our Journal has been nominated for a graphics award.

Our office at Greenville is going along very well, thanks to Mary Edgerley and her staff. Things have improved and will continue to do so.

Everyone was concerned about our being on the computer but things have gone very well. I realize, of course, this is a time of transition from Lafayette to Greenville and we kind of went into hibernation at Greenville. However, I think that any time you have a major change-over with respect to something like this, there are going to be times when you are kind of in the dark. However, things have picked up, are functioning well and they will continue to improve as we go along.

With regard to the meetings that we have had, the Task Force with the American Physical Therapy Association, there will be some update concerning that at the District meetings and also this afternoon at two o'clock, when we have our talk on state licensure. We will have somebody there to bring you up to date on the latest information on APTA. We just received some information from them and if you would like this information to take back to your respective Districts, you may pick it up at that particular meeting.

As you know, we had two meetings with the APTA Task Force in the past year, one in Pittsburgh and one at San Francisco. I feel these were productive and they were very interesting to say the least.

The model legislation has been revised and I think the revisions are going to involve them being a better guide for the individual states to use.

Because of our meetings with the APTA Task Force last summer, I asked for, and for the most part received total cooperation, a moratorium on all new legislative efforts relative to licensure as it pertained to athletic training. The moratorium was a show of faith to the APTA and it also gave a lot of individual states a chance to rework their bills and gather support. Hopefully, this moratorium prevented any hastily thrown together bills that always end up by being defeated.

## ANKLE TAPING *Continued from page 150*

of an adhesive strapping to the ankle, it is of such an inconsequential nature so as not to be the reason for discontinuing preventative taping. This is another area in which sports medicine staffs need to recognize the available evidence and base their practices on it.

To summarize, the purpose of this paper has been to discuss the questions concerning preventative ankle taping. The results of most of the available research to this date has been applied toward some of the most often heard arguments regarding the advantages and disadvantages of this practice. Unfortunately, not many of the arguments have been definitely answered because of the lack of data resulting from sound scientific investigation. One consensus that has been established, however, is that the adhesive strapping loses much of its supporting strength during activity. On the other hand, it also has appeared that taped ankles are less susceptible to injury during athletic participation. The only available study that concerned itself with lower leg muscle strength revealed that taping may actually stimulate certain muscles, rather than preventing them from getting stronger, as is frequently the belief. In addition, it was concluded that tape applied to the ankle does not seem to place the knee joint in a more dangerous situation.

In conclusion, it does not appear that preventative ankle taping is as ineffective as many of its critics suggest. There does even seem to be an indication that taped ankles are not as easily sprained, but the results of only two injury surveys are not enough to make an unequivocal statement. It is hoped that the above discussion will spur more extensive research into this and other problem areas that face sports medicine staffs across the country. Such investigations will yield results upon which athletic training practices can be based,

As of this morning, I am lifting the moratorium. However, there are also two requests or suggestions I would like to make.

1. Please send a copy of your proposed legislation to Bob Behnke at Indiana State before you introduce it. We have spent a lot of time and money putting together a model for you to go by and it would be foolish not to take advantage of Bob's expertise in this area. There will be differences from state to state and adjustments can be made for these.

2. I want to encourage each state to work with the respective state chapter of the APTA. Some of you will have a real battle, others will not. It would be to your advantage to initiate dialogue with these people. Try to work with them and do not wave at them just to get their attention and go off hell bent for leather.

Again, I am lifting the moratorium with these two suggestions.

Most of you have received your Journal, which contained an editorial by me with regard to the relations or lack thereof between NATA and the USOC Medical Services Committee. I feel the editorial is self-explanatory and your officers are making the necessary changes in our Code of Ethics, whereby it is not unethical to seek, on your own, an athletic trainer selection for any of the Olympic Games. Our Association no longer will be involved with these selections.

I might say that we have a green book, which I did not bring along, but which contains all of the minutes of the Dearborn and Las Vegas meetings that were described in the editorial. Each Director has one. If any of you have any questions insofar as the dialogue that went on is concerned at these Board meetings, you are more than welcome to read these books. I also have one and if you have any doubts as to what went on in our conversations with these people, we do have this book available. So, if you would like to read it, it is there for you to read. See your District Director and he will let you read through it.

In closing, I want to encourage each of you to let your officers know your ideas and feelings as to how all of you can make our organization better.

The Reverend Billy Graham in his book "Day by Day", quotes E. Stanley Jones' story about a man who had an overnight guest and as he showed the guest to his humble bedroom he said, "If there is anything you want, let me know and we will come and show you how to get along without it."

I sometimes feel this is the attitude of some of the members toward the people serving as officers of the NATA. After having the privilege of serving as your President for one year, I can assure you this is not the case. Let your officers know your feelings. If we communicate with one another we, the NATA, will continue to advance and grow.

I appreciate your time and attention and at this time I will entertain a motion to adjourn our National Business Meeting.

Well, before doing that, let me say that we have an individual here today who, thanks to certain airlines and airline schedules, it only took him eighteen hours to get from Greenville, North Carolina to this place. I would like to introduce to you and recognize at this time our legal counsel of the NATA, Mr. Larry Graham. Will you please stand up. (Applause)

Larry will be with me when we come around to the various District meetings and so if you have any questions, Larry has been with us at both task force meetings with APTA and consequently if you do have questions about licensure, he will be there to answer them.

Now, is there anything further? If not, I will entertain a motion to adjourn.

... Whereupon, in accordance with motion made by Mr. Tom Wilson, seconded by Mr. Dean Weber, voted upon and carried, the National Business Meeting was, at twelve-thirteen o'clock p.m., adjourned sine die...

enabling the trainer to provide better care for the athletes under his/her supervision.

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