



ATHLETIC TRAINING

THE JOURNAL OF THE NATIONAL ATHLETIC TRAINERS ASSOCIATION



IN THIS ISSUE:

- Meet the 1982 NATA Presidential Candidates
- Professional Burnout: Implication for the Athletic Trainer
- Back to Reality: Athletic Training at the High School Level
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- Case History: Ruptured Colon
- The Schering Symposium: Soft Tissue Injuries of the Foot

VOLUME 16
NUMBER 3
FALL 1981

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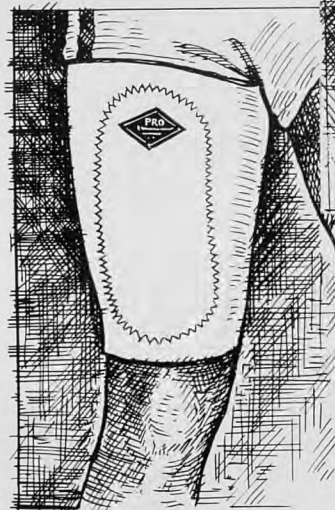
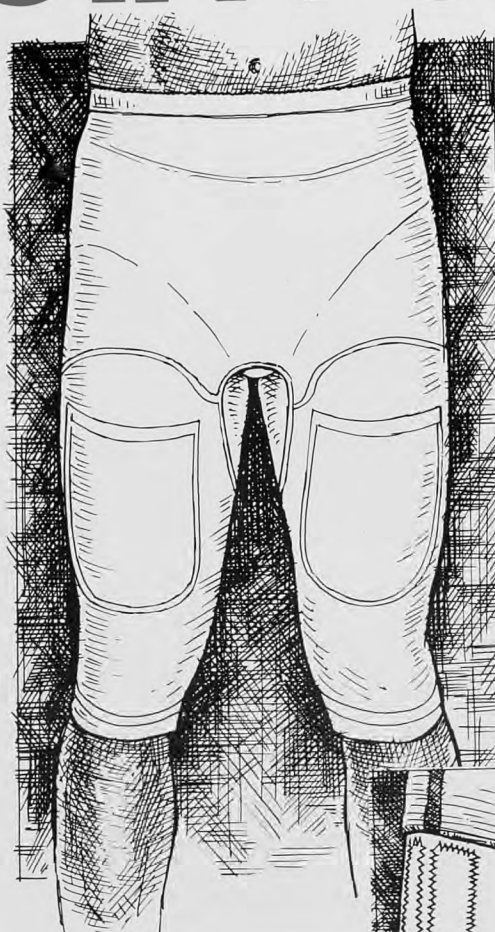
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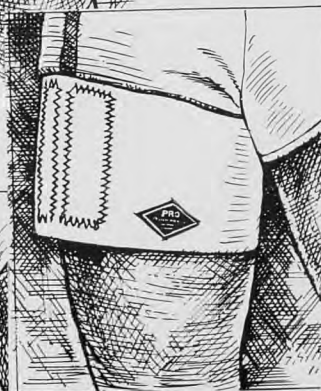
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ATHLETIC TRAINING

THE JOURNAL OF
THE NATIONAL ATHLETIC TRAINERS ASSOCIATION

VOLUME 16, NUMBER 3, FALL 1981

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President's Message



Dear NATA Members:

It was good to see so many of you at our Annual Meeting and Clinical Symposium. This year's meeting was a record setting one in every respect....registration, exhibits, and banquet attendance. The members of District Six are to be commended for the outstanding job they did in making the "biggest meeting ever" go so smoothly.

As many of you know, the first important decision your Board of Directors made in Fort Worth was to approve the purchase of a 4100 square foot building in Greenville, North Carolina. This building will house our National Office and will provide much needed additional space to enable our staff to handle the daily activities of NATA. This decision represents not only a sound financial investment, but a positive, progressive step for the future of NATA.

Also, Dr. Gary Delforge of the University of Arizona was appointed Chairperson of the Professional Education Committee. The Board of Directors, Executive Director, and I are confident Dr. Delforge will provide the leadership necessary to continue meeting the educational needs and requirements for our profession.

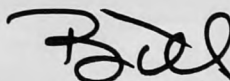
A standing committee for CEU's has been established. Because of the importance of this area, the Board of Directors felt such a move was necessary. Please continue to write to your District CEU representative for course approvals and send the CEU's you earn to the National Office.

I want to encourage each certified member to participate in the Presidential Election. Dr. Bobby Barton and Dr. Donald Chu are the two candidates and both have worked long and hard for NATA. Our organization is indeed fortunate to have two such highly qualified people, one of which will take over the leadership of NATA in June of 1982.

We must continue to progress and move forward. All humanity is divided into three classes; those that are immovable, those that are movable, and those that move. By working together, keeping clearly in sight what's best for NATA and not letting small special interest areas impede our progressive movement, each of you can be one of those that moves and makes a contribution to your profession.

Please continue to express your views, suggestions, and concerns to your district and national officers. In order for us to establish, move toward, and reach our goals, you must communicate with your officers. Your input is vital to the growth of NATA.

Sincerely,



A black and white portrait of a middle-aged man with dark, wavy hair and a prominent mustache. He is wearing a dark suit jacket over a light-colored shirt and a diagonally striped tie. He is looking directly at the camera with a slight smile. The background is a plain, light-colored studio backdrop.

Earlier Delivery of this Issue

CEU Journal Quizzes

Trainer of the Year Award

Speaking of Awards . . .

pation in the application process of these many fine scholarships. It is gratifying to realize just how much support we are receiving to make these awards possible.

A Bid Farewell . . .

Request for Injury Data

Deficiencies

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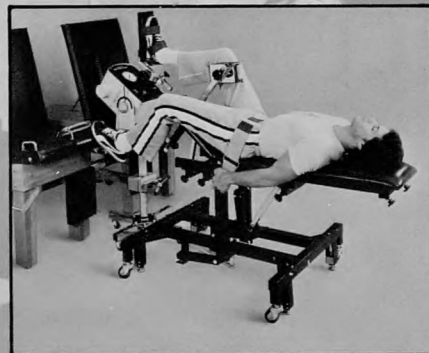
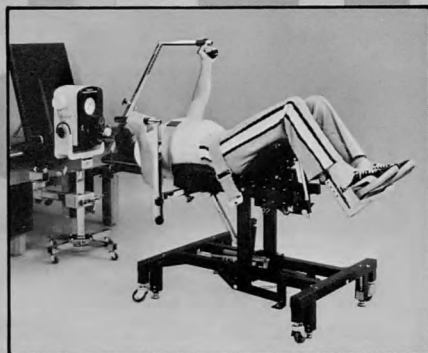
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AT10/81



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Announcements

Drackett Company Makes Scholarship Donation to NATA



Bill Chambers, NATA President, receives a \$2,000 check for the NATA scholarship fund from Sara Paxton, The Drackett Company, during the annual business meeting.

The scholarship donation is in honor of Otho Davis who was voted Professional Division Trainer of the Year. Drackett sponsors the Trainer of the Year Award for its product NUTRAMENT.

Correction

We regret that in the Summer Issue Volume 16, Number 2, page 142, a statement was inaccurately made that James Hunt, the former head athletic trainer at the University of Michigan was deceased. Mr. Hunt, is enjoying his retirement living in Ann Arbor, Michigan.

Take Advantage of Tax Deductions

Treasury regulation 1.162-5 permits an income tax deduction for educational expenses (registration fees and cost of travel, meals and lodging) undertaken to: (1) maintain or improve skills required in one's employment or other trade business, or (2) meet express requirements of an employer or law imposed as a condition to retention of employment, job status or rate of compensation.

National Audiovisual Center Announces New Emergency Medical Services List

The National Audiovisual Center announces the publication of its new, free Emergency Medical Services Information List. The list contains over 100 films, filmstrips, slide sets and multimedia kits available for purchase and rental by emergency medical technicians and the general public.

Areas of emergency medical services covered include first aid, disaster preparedness, cardiopulmonary resuscitation and more. The materials in the list were pro-

duced by over 18 Federal agencies including the National Medical Audiovisual Center, the Federal Emergency Management Agency and the Mine Safety and Health Administration.

The National Audiovisual Center was founded in 1969 to make audiovisual materials produced by the U.S. Government available for public use and to serve as the central source for all Federal AV materials. In its collection are over 12,000 titles in 24 major subject areas.

A professional reference staff at the Center is accessible both to emergency medical technicians and the public. The staff provides specialized research and answers inquiries about the types, sources and availability of Federal audiovisual materials.

For a free copy of the Emergency Medical Services Information List or lists in 24 other subject areas, write the National Audiovisual Center, General Services Administration, Attn: Reference Section/PR, Washington, D.C. or call (301) 763-1896.

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, ATC, Chairman, NATA Career Information Services, Athletic Department, Deerfield Academy, Deerfield, MA 01342.** Single brochures are supplied upon request at no charge. NATA officers and committees, schools having an approved athletic training curriculum, and those having an apprenticeship program are furnished multiple copies of the brochure upon request at no charge.

A Note of Thanks

We want to thank all the NATA members who traveled to Fort Worth for the National Meeting and Symposia.

Those of us who were there enjoyed fabulous facilities, good meetings and the pleasure of seeing many friends again.

The banquet was fun for us, with all the good food and western dancing, not to mention the pride we all felt for the Hall of Fame inductees and 25-year award winners.

It was our pleasure for District 6 to serve as your hosts and we hope that you and your family enjoyed your visit to Fort Worth and our version of the NATA meeting.

Ross Bailey, Billy Pickard, Cash Birdwell

NATA Purchases New National Office Building

See photo on page 164

TO: President, Executive Director, Board of Directors
of National Athletic Trainers Association

FROM: Laurence S. Graham, General Counsel to NATA

SUBJECT: Purchase of building and lot located 1001
East Fourth Street, Greenville, North Carolina

DATE: July 15, 1981

On June 4, 1981, the Association membership voted to purchase an office building in Greenville, North Carolina to house its national office. I am pleased to advise you that on June 30, 1981, a deed was recorded in the Pitt County Register of Deeds in Greenville, North Carolina conveying three lots of the College View Subdivision to "The NATA Foundation, Inc." These lots include a parking area, a one story brick office building and surrounding yard.

There are two points of this transaction which merit special attention:

1. The Association assumed an existing 14% loan of \$29,103.91 (rather than pay all cash for the property). Since the loan can be repaid at anytime without penalty, the Association can maintain funds equal to the amount of the loan in interest bearing accounts greater than the amount of interest on the loan. As a result, the Association is making 1% to 3% on its money in the tradeoff.

2. Title to the property was taken in the name of "The NATA Foundation, Inc." NATA is an unincorporated association and in North Carolina can hold title only in the name of trustees. Since the Association does not have trustees designated, I proposed the creation of an entity such as the Foundation to hold title to the land. This

action has the approval of your President, Executive Director, as well as Brooks McIntyre, the Association's accountant. The membership of the Foundation is limited to those individuals serving in the capacity of national directors of the Association, allowing easy transition when the national directors change. The use of the Foundation permits ease of transfer of the land in the event the Association wishes to either lease or sell.

I commend the Officers and Board for being far-sighted in this move. The result is a handsome national office everyone will be proud of.

New Address for Professional Education Committee

The new address for the Professional Education Committee is Gary Delforge, Chairman, NATA Professional Education Committee, Department of Physical Education, University of Arizona, Tucson AZ 85721, Phone (602) 626-4947, Secretary: Kanda Koehler.

Continuing Education Reminder

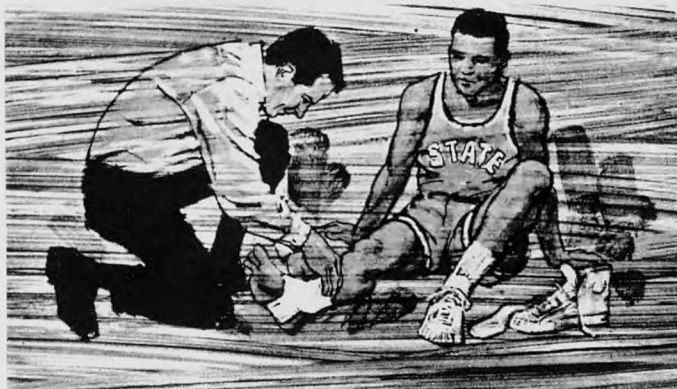
As of December 31, 1981 the first three year period for accumulating CEU's will end. On July 31, 1981 32% of the certified membership was below the required six. The three year accumulative total will appear on each certified member's dues notice; if there are any discrepancies, please contact the National Office. If a certified member does not accumulate the required number of CEU's, membership will be suspended and he/she will not be able to vote or sponsor membership in the NATA. Detailed information concerning appeals will appear in the Winter Journal. +

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National Athletic Trainers Association

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**Pittsburgh, Pennsylvania
January 8-10, 1982**

General Sessions:

Friday Afternoon	Program Director's Council Current Issues in Athletic Training Education
Friday Evening	Key Note Address
Saturday Morning	Physiological Implications for the Athletic Trainer
Saturday Afternoon	Clinical Applications for Athletic Training
Sunday Morning	Reconditioning of the Athlete

**Denver, Colorado
February 5-7, 1982**

General Sessions:

Friday Evening	Key Note Address
Saturday Morning	Assessment of Physical Parameters for Athletic Competition
Saturday Afternoon	Physiological Implications For The Athletic Trainer
Sunday Morning	Ergogenic Aids and Athletic Performance

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number amount
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Letters to the Editor

To the Editor:

I read with interest the article "The Role of the NATA Program Director" by John Sciera (*Athletic Training*, Summer 1981). It appears that some people are beginning to recognize the extremely professional nature of Sports Medicine and desire to change with the recent advances in that field.

I graduated from Rice University this past May and, of course, it was there that I obtained my clinical experience as a student trainer. While at Rice, our chief team physician and two athletic trainers instilled a deeply professional and confident attitude in me with regard to my future profession, Sports Medicine.

Through these experiences I have become an opponent of the terminology "Athletic Training." Of the two words, only "Athletic" has anything to do with our work. When asked what my job is, I answer, "I'm an athletic trainer." Too many times this brings the question, "Well, what do you train?" Lions, dogs, parrots, athletes . . . ?

"Athletic Training" should be left to the annals of athletics, with "Sports Medicine" replacing it on a wholesale basis. As for "Athletic Trainer," I like the alternate title proposed to me by one of my Rice supervisors: "Sports Clinician." All of our work is clinical and "Sports Clinician" sounds infinitely more professional than "Athletic Trainer."

I am not a rebel by any stretch of the imagination. I do maintain a dedication to professionalism and I constantly strive to improve. It is for these reasons that I have addressed you.

No changes will come easily; however, we must believe in them. I would like to hear comments on this issue from other members of the Sports Medicine field.

Jeffrey A. Russell
Head Athletic Trainer
Flowing Wells High School
Tucson, Arizona

To the Editor:

I am writing in response to the article written by Mr. John Sciera and Mr. James Tovell concerning up-grading the profession of Athletic Training.

I too feel that the apprenticeship route for certification is inadequate and should be abolished. The use of physical modalities and other complicated means of therapeutic treatment must be learned in an educational setting before hands on experience takes place. There are indications and counter-indications that should be studied and the theory behind the use of this equipment should be learned.

We are asking other professional organizations to except us without making the necessary changes that they themselves have imposed of their constituents. I think Mr. Tovell's idea on athletic training assistance is an excellent one which warrants further investigation. All future certified trainers should be required to attend an approved curriculum program.

I also feel that it is time for a change in our name. Too often the athletic trainer is confused with a conditioning coach, boxing trainer or horse trainer. If we are to truly up-grade ourselves we must establish a unique identity. One that will not be confusing or misleading and will bring awareness of our new achievements. The national

Athletic Therapist or Sports Medicine Therapist would definitely seem more appropriate in identifying ourselves.

I believe that the above mentioned changes should be made if we are to gain the respect of the medical and allied medical communities and achieve our goal of state licensure. If we hope to reach a standard of unquestionable professionalism changes must take place.

Matthew T. Costello
Head Athletic Trainer
Plainfield Public Schools
Plainfield, N.J.

To the Editor:

A few corrections are necessary relative to the article by B.L. Rogers, "The Mechanics of Head and Neck Trauma to Football Players" that appeared in the Summer '81 issue of *The Journal*. The legend for Figures 3 and 4 indicate hyperflexion; this should read hyperextensional.

More importantly however, is the continuation of the concept that forced hyperextension may result in the posterior rim of the helmet impinging against the posterior tubercle of C-1 or the spinous processes of C-2. Recent research has definitely proven that the rim does not contact the upper cervical vertebra at all. The results of experimental laboratory tests have shown that the posterior helmet rim, in hyperextension contacts the neck at the level of C-7 and/or T-2. (Hodgson and Thomas: "Mechanisms of Cervical Spine Injury During Impact to the Protected Head", Proceedings, Twenty-Fourth Stapp Car Crash Conference).

The concept of the helmet impinging at C-2 came from several clinical cases where such mechanism was postulated without laboratory verification.

The recent research also indicated that the high cut rear rim caused higher neck strain by allowing greater hyperextension of the neck.

D.F. Huelke
Professor of Anatomy
The University of Michigan
Ann Arbor, Michigan +



Bill Chambers, (right) President of the National Athletic Trainers Association, presents the key to the new National Office to Otho Davis, Executive Director. The new offices are located at 1001 East Fourth Street in Greenville, North Carolina, and spaciouly house the entire NATA national operations.

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Book Reviews



Kathleen Fox, ATC, MED
University of Central Florida

American Academy of Orthopaedic Surgeons Symposium on the Athlete's Knee

F. James Funk, Jr., MD, Editor
List Price: \$40.50
218 pages, illustrated
The C.V. Mosby Company
11830 Westline Industrial Drive
St. Louis, Missouri 63141
1980

Presented by different authors at a 5-day course on the athlete's knee sponsored by AAOS at Hilton Head, South Carolina, in 1978, each chapter deals with specific knee disorders. Emphasis is placed on diagnosis with accuracy to help get positive results from treatment and minimize complications. Chapter topics range from "Clinical

Biomechanics of the Knee" and "Injuries to the Anterior Thigh", to "Anterolateral Rotary Instability." Conditions of the patella, menisci, ligamentous instabilities, cysts, osteochondral lesions, tendonitis and patella femoral pain are discussed thoroughly and yet easily understood by the athletic trainer and/or therapist. Each chapter contains ample illustration.

Of particular interest is the "Title IX Knee" chapter. It discusses the female knee and how it differs from the male knee anatomically and physiologically. It is one of the few presentations done concerning the structural similarities and differences of male and female. Well illustrated in the chapter on clinical biomechanics are the many different laxity tests and their reliability in testing functional versus clinical forces on structures.

This book is an excellent reference for athletic trainers and/or physical therapists that deal with athletic related knee injuries from a conservative standpoint. Coaches with a good understanding of functional anatomy will also find this to be a good reference. While some of the conclusions made are obvious, there is much to be thought about while studying this book.

Margurite Higgins +

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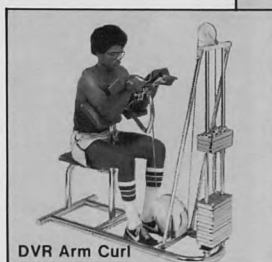
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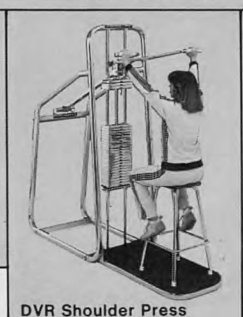
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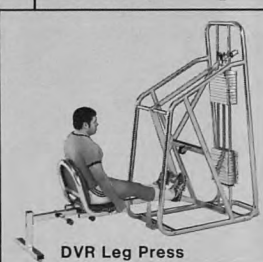
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Simple and Effective Protection for the Broken Nose

Richard Ray, ATC

Nasal injuries are very common in athletics. Because of the prominent position and natural lack of padding that the nose has, it is very vulnerable to contusions, lacerations, or fractures. There are actually two parts to the nose, cartilage and bone. Many times a "fracture" will actually just be a separation of the nasal cartilage from the bone. The two most common mechanisms of nasal fracture are head-on blows and blows from the side. The blow from the side usually gives the appearance of obvious fracture-dislocation.

First aid treatment for the suspected nasal fracture includes application of cold packs and gauze plugs with direct pressure over the nostrils to stop any nasal bleeding. The athlete should then be referred to a physician for medical diagnosis. Most simple nasal fractures are not serious enough to keep an athlete out of action. If the nose can be adequately protected, the athlete should be able to return to competition within a few days.

The nasal protectors shown are very simple to make.

struct the mask. This can be accomplished by using the following procedure: heat the strips to be connected in very hot water until they are pliable. Apply tape remover to the surfaces to be joined. Rub both surfaces until they feel tacky. Press the surfaces together and hold tightly for 15-30 seconds. Place the joined surfaces in cold water for two minutes to set.

The two 6½"x1½" strips should be bonded together to form one double-thickness strip. This double-thick strip will form the center piece of the mask. Once the center piece is bonded together it should be shaped to fit the contour of the nose. The center piece should not rest on the nose, but should leave an air space of roughly one-quarter inch.

After the center piece has been formed, the frontal (top) and maxillary (bottom) pieces should be bonded in place. Make sure to form the frontal and maxillary pieces to the contour of the forehead and maxilla before the Orthoplast® cools.



Figure 1. Front view of nasal protector.



Figure 2. Side view of nasal protector



Figure 3. Nasal protector for wide nose (left) and for thin nose (right).

they can be constructed of scraps of Orthoplast® and offer adequate protection for most sports. The following supplies are needed for construction of the mask.

- One 5"x1" strip of Orthoplast®
- One 5½"x1½" strip of Orthoplast®
- Two 6"x1½" strips of Orthoplast®
- Tape remover
- One shoestring
- ¼" adhesive foam

Orthoplast® strips must be connected in order to con-

Once the strips are bonded together the mask will need to be trimmed of all excess Orthoplast®. Make sure the center strip is not so wide as to obstruct the athlete's vision. When the final shape is obtained, the adhesive foam can be attached to the frontal and maxillary strips. A shoelace should be taped to the maxillary strip in the manner shown in the illustrations.

The mask should be fastened to the face by painting the forehead with benzoin and taping around the head with underwrap and elastic tape. One must be sure to pass the tape under the occipital process to prevent the tape from riding up. the shoestring that is attached to the maxillary strip should be tied in back of the neck.

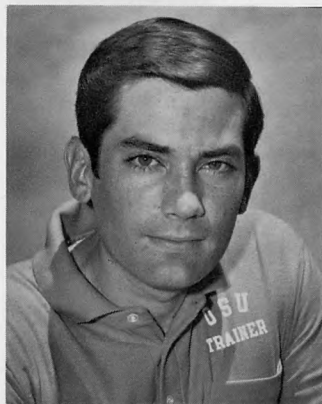
This mask has been used with great success on many Kansas State University athletes. It provides good protection against any further nasal trauma yet allows the athlete the benefit of unimpaired vision that other masks do not.



Mr. Ray is currently assistant athletic trainer at Kansas State University, Manhattan, Kansas 66506.

*Editor's Note: Anyone wishing to have an idea, technique, etc. considered for this section should send one copy to **Ken Wolfert, 111 Buckeye Street, Hamilton, Ohio 45011**. Copy should be typewritten, brief, and concise, using high quality illustrations and/or black and white glossy prints. +*

Calendar of Events



Jeff Fair, ATC, MS
Oklahoma State University

September, 1981

26 Canton/Akron Area Coaches Conditioning Clinic, Akron, Ohio. Contact Mark Reiman, 730 Pine Knolls, Apt. 1, Akron, Ohio 44310.

October, 1981

1-3 Louisiana State University School of Medicine Symposium on Prevention and Treatment of Running Injuries, New Orleans, Louisiana. Contact Registration Department, Charles B. Slack, Inc., 6900 Grove Road, Thorofare, New Jersey 08086.

2-3 Football and the Problem Knee, Columbus, Georgia. Contact Ronald G. Peyton, Sports Medicine Education Institute, Inc., 20 Linden Avenue, N.E., Suite 400, Atlanta, Georgia 30308.

10 Cybex/Isokinetic Clinical Workshop, La Crosse, Wisconsin. Contact George J. Davies, Orthopedic and Sports Physical Therapy, Bethany St. Joseph Health Care Center, 2501 Shelby Road, La Crosse, Wisconsin 54601.

16-17 Examination and Treatment of the Lower Extremities, New York City. Contact The Sports Medicine Education Institute, Inc., Suite 400, 20 Linden Avenue, Atlanta, Georgia 30308.

18-23 Recognition and Management of Diving Casualties, San Diego, California. Contact Edith Bookstein, Office of Continuing Education, M-017, University of California - San Diego School of Medicine, LaJolla, California 92093.

24-29 National Recreation and Park Association Convention, Minneapolis, Minnesota. Contact National Recreation and Park Association, 1601 North Kent Street, Arlington, Virginia 22209.

November, 1981

7 Columbus Area Coaches Conditioning Clinic, Columbus, Ohio. Contact Garry Benford, 20 W. Long Street, Columbus, Ohio 43215.

13-14 Examination and Treatment of the Upper Extremities, Portland, Oregon. Contact The Sports Medicine Education Institute, Inc., Suite 400, 20 Linden Avenue, Atlanta, Georgia 30308.

29-Dec 2 Sports Medicine and the High School Athlete, New Orleans, Louisiana. Contact American Academy of Orthopedic Surgeons, Department of Education, 444 North Michigan Avenue, Chicago, Illinois 60611.

December, 1981

5 Cleveland Area Coaches Conditioning Clinic, Cleveland, Ohio. Contact Matt Chinchar, 1791 Idlehurst Drive, Euclid, Ohio 44117.

10-12 The Athlete: Risks of Injury and Sudden Death, New York City. Contact American Heart Association, Scientific Sessions, 7320 Greenville Avenue, Dallas, Texas 75231.

12 Cybex/Isokinetic Clinical Workshop, LaCrosse, Wisconsin. Contact George J. Davies, Orthopedic and Sports Physical Therapy, Bethany St. Joseph Health Care Center, 22501 Shelby Road, LaCrosse, Wisconsin 54601. +

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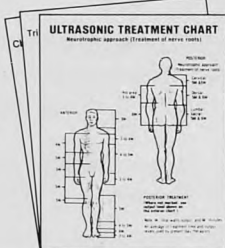
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Topics	The Faculty Teams	
Pre-season Exam/Field Decision Making	Allan Ryan, M.D.	Lynn Wallace, PT, ATC
Bio-medical Changes in the Recreational Runner with Leg Length Discrepancies	Martin Legett, M.D.	Karl Klein, FACSM, FACTA
Organizational Considerations in a Marathon Race..	H. Bates Noble, M.D.	Richard Hoover, PT, ATC
Patellofemoral Joint Problems in the Recreational Runners: The Mechanism, Examination and Conservative vs. Surgical Treatment	James Andrews, M.D.	T. A. Blackburn, PT, ATC
Lower Extremity Injuries in Runners; The Prevention and Treatment	William G. Clancy, Jr., M.D.	George Davies, PT, ATC
Nuclear Medicine and the Recreational Runner . . .	Lawrence E. Holder, M.D.	William S. Quillen, PT, ATC

Additional Faculty		
The Physiological Response to a Psychological Aspect of Recreational Running	George Sheehan, M.D.	
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2. Define the orthopaedic basis of evaluation of injuries specific to running both on a competitive and recreational level.
3. Define the use of physical modalities and assistive devices in treatment of running injuries.
4. Define the basic components of a physical examination and orthopaedic screen in athletics.
5. Define basic rehabilitative techniques for the treatment of extremity pathologies that come from running activity.

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The 1980 Schering Symposium

Soft Tissue Injuries of the Foot

Jack H. Henry, MD

Edited by:
Don Kaverman, ATC

The foot is an ingenious structure designed to transfer the body weight from the leg to the ground.¹ Its arch provides an elastic spring that helps dissipate this force so that no single area of the foot bears too much weight; it also adds "spring" to the gait. Basically, the foot is divided into three divisions. The posterior bony part provides stability as the heel strike occurs. The mid portion provides spring by virtue of its tendinous support. The anterior part provides a basis for propulsion (Fig. 1).

Repeated stress to the various portions of the foot are accommodated as various activities are engaged by the athlete. Motions of the foot are varied and complex. Because of these motions, the foot has the ability to bear weight in a myriad of positions.

Dr. Henry is a staff member of Orthopaedic Surgery and Athletic Medicine, PA, 8042 Nurzbach, San Antonio, Texas 78229.

Injuries sustained to the posterior part of the foot are generally due to compression as the heel strikes the ground; those sustained by the mid-foot result from a force which strains the foot beyond its normal arch; injuries to the fore- or anterior - foot occur as a result of too much force in "pushing off" or a direct force. Because of repeated trauma to the foot, minor stresses can produce major disability subsequent to an apparent isolated episode.

The purpose of this study is to consider soft tissue injuries of the foot. It must be remembered, however, that a fracture should be ruled out by adequate x-rays before a diagnosis of soft tissue injury is entertained. On that premise, let us progress to some specific soft tissue injuries.

Posteriorly, the Achilles tendon (Fig. 2) receives the gastrocnemius and soleus muscles which combine to plantar flex the foot. It is an important structure in jumping, running or resisting an anterior thrust, such as a block. This tendon may undergo enough stress to rupture during these

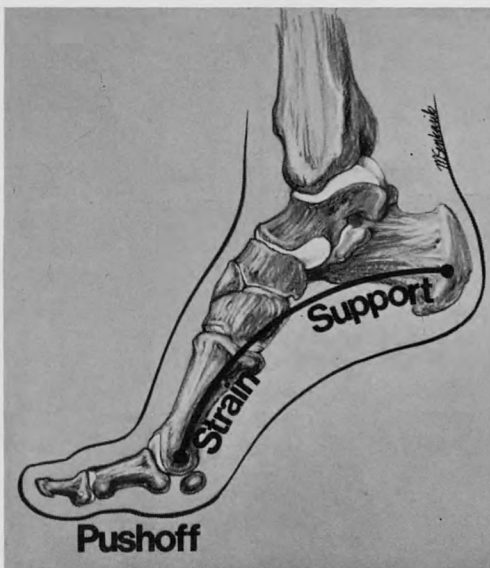


Figure 1. Lateral illustration of the foot

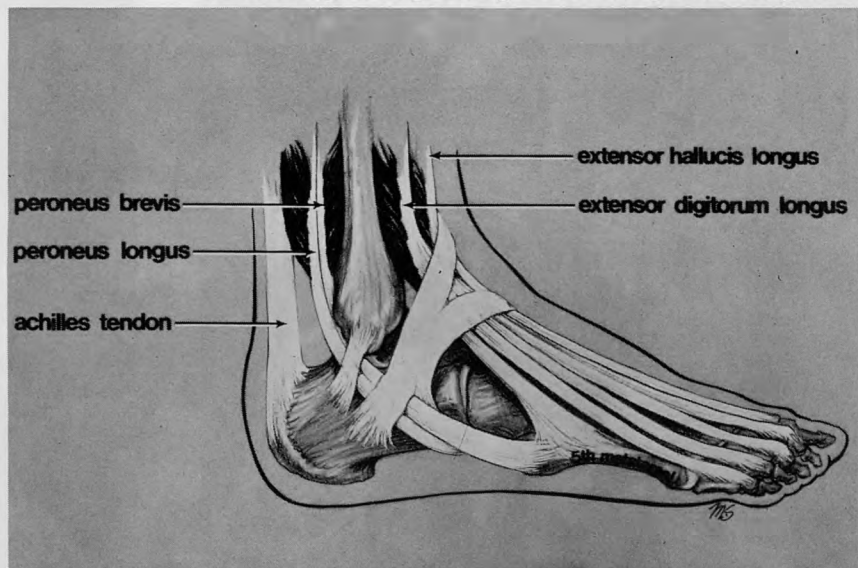


Figure 2. Lateral illustration of the tendo Achilles

mechanisms. If a rupture occurs, the athlete often describes the sensation as feeling like he has been shot by a gun; the pain is severe and he will be unable to raise up on his toes. As a result, a characteristic "flop foot" gait occurs. Swelling of the gastroc-soleus complex and tendon occur later as pain increases. The diagnosis is made by the examiner palpating a defect in the tendon itself (Fig. 3), however this can be difficult if much swelling has occurred. A good test for this rupture is to lay the athlete prone and flex the knee ninety degrees. By squeezing the calf, the foot normally plantar flexes (Fig. 4); if the tendon is ruptured, the foot does not plantar flex (Fig. 5). This test is called the T. Campbell Thompson sign² and, if positive, is indicative of an Achilles tendon rupture. The treatment of choice for an Achilles tendon rupture is surgical repair (Fig. 6). Casting the foot in plantar flexion may allow healing, but surgical repair results in a stronger tendon.

More often repeated stress on the tendon causes "micro tears" and produces chronic Achilles tendinitis. A mass may develop on the tendon and palpation produces pain, as does running and jumping. Treatment for Achilles tendinitis is rest, ice and anti-inflammatory medications. This is followed by stretching and strengthening the gastroc-soleus complex. Rarely, surgical release of the lining of the tendon is done to allow granulation tissue to heal the lesion.

Occasionally, these same mechanisms cause a painful "pop" in the calf, but no signs of a rupture can be detected. The calf will swell and be painful. In these cases, a rupture of the plantaris must be suspected. Treatment for a rupture of the plantaris is usually nonsurgical. Rest, ice, compression and range of motion of the ankle serve to minimize swelling. When the pain subsides, the calf is rehabilitated by flexibility and strengthening exercises.

Anterior to the insertion of the Achilles tendon is a potential space or bursa. This bursa becomes inflamed in runners

due to pressure of the shoe on the Achilles tendon and a situation known as retrocalcaneal bursitis occurs. The athlete complains of pain on plantar flexion, but tenderness anterior to the tendon distinguishes this condition from tendinitis. A swelling or mass will occur that proves tender. Athletes who display a high calcaneal tuberosity are more susceptible to this condition. Treatment is to relieve the pressure. Ice, rest and anti-inflammatory medications usually resolve the condition. However, should the situation become chronic, the athlete will be incapacitated and surgical removal of part of the calcaneal tuberosity is indicated. This is a formidable procedure and recovery is prolonged, however a return to competition is usually possible.

Laterally, the peroneus longus and brevis tendons (Fig. 2) act to evert the foot. The brevis inserts into the 5th metatarsal base and the longus inserts under the foot. If the foot is dorsiflexed and everted, the peroneal tendons may sublux anteriorly over the fibula. The athlete will complain of a tearing sensation and pain not unlike that of an ankle sprain, however the mechanism of injury is dorsiflexion and eversion, not plantar flexion and inversion. Examination will reveal tenderness on the posterior aspect of the fibula superior to the ankle joint. The tendon may be subluxed by repeating the mechanism of injury. Treatment of the acute subluxation includes ice, compression and rest. Unfortunately, this subluxation is often seen after repeated episodes and a chronic subluxation is present. Treatment of the chronic subluxation is difficult. Stretching the heel cord and taping the ankle in slight inversion may help, but if the ankle is painful with repeated activity, surgical repair of the retinaculum covering the tendon may be necessary.³ Rehabilitation is effected by stretching the calf and the peroneal muscles. Prompt recovery usually occurs.

Although soft tissue injuries are being considered, a discussion of the Jones Fracture is appropriate. This repres-



Figure 3. Palpation of tendon defect



Figure 4. Plantar flexion of foot



Figure 5. Positive T-Campbell Thompson sign

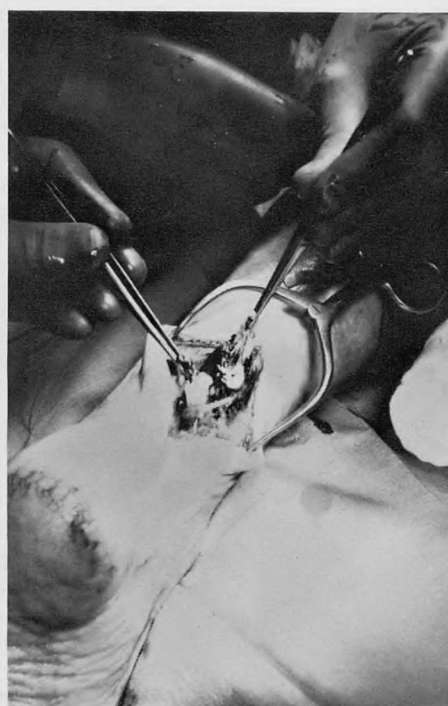


Figure 6. Ruptured tendo Achilles



Figure 7. Clinical picture of tender anterior process of the os calcis.

ents an avulsion of the peroneus brevis tendon from the base of the 5th metatarsal. The mechanism of injury is forced inversion of the foot. A "snapping" sensation is sometimes experienced by the athlete and acute pain occurs. The athlete may be able to complete competition, but pain usually precludes a good performance. Examination will reveal a tender swollen 5th metatarsal base. X-rays confirm the diagnosis. Treatment is directed at immobilizing the fracture in slight eversion until pain subsides. The fracture will usually heal in four to six weeks, however protection can be discontinued in three weeks in most cases. A similar inversion mechanism may result in a micro-tear of the peroneus brevis tendon. This usually occurs in patients with a mild amount of lateral ankle instability. As a result of the micro-tear, an inflammation of the tendon will occur.⁵ The athlete will complain of pain and swelling under the lateral malleolus with sustained activity. Treatment consists of ice and rest and anti-inflammatory medication. After the acute reaction subsides, the peroneus tendons are strengthened by resistance exercises and a lateral sole wedge is used to decrease the pull of the tendon.

The anterior process of the calcaneus is another structure on the lateral aspect of the foot (Fig. 2). Ligaments of the navicular and cuboid bones attach to this process. When the foot is inverted, or turned inward, these ligaments are stretched and may tear or avulse the anterior process of the calcaneus.⁴ In either case, weight-bearing and inversion of the foot will produce pain. Specific tenderness over this process will be present (Fig. 7). Swelling is generalized and does not localize the lesion. An oblique x-ray of the foot will reveal a fracture, however it should be noted that ligamentous injuries are more common. Treatment is immobilization until the acute pain subsides. Ice and anti-inflammatory agents are used in treating ligamentous injuries. A fracture will heal in four weeks, ligamentous lesions heal more quickly. However, if the foot is left unprotected and activity is allowed, persistent pain will prevent good performance on the part of the athlete.

Medially, the posterior tibial tendon passes underneath the medial malleolus and inserts into the tuberosity of the navicular bone (Fig. 8). It balances the action of the lateral peroneal tendons by acting to invert the foot. Forced eversion of the foot or an uncontrolled contrac-

tion may stretch or tear the tendon, resulting in a strained foot. The athlete will complain of acute pain, and the tendon, or its bony insertion, will be tender. This condition is quite common in basketball players. Often the player does not remember an acute injury, but complains of chronic pain with weight-bearing and manifests a tendon that is swollen. This situation will be accentuated if a flat foot is co-existent, since the flattened arch itself stresses the tendon.⁶ The result of this condition is an inflammation inside the tendon sheath which results in a secretion of fluid. The fluid produces sticky adhesions and limitation of motion which further complicate the problem. Treatment of posterior tibial tendinitis is the same as for other strains; rest, ice and anti-inflammatory medications. When pain and swelling subside inversion exercises with resistance, as well as stretching, should be done for rehabilitation. Protective taping of the foot in inversion and arch supports prevent further irritation to the tendon.

The plantar surface of the foot is covered with thick skin for maximum protection. In normal gait, the heel strikes first, with a compressive force, and the forefoot is used for push-off. Consequently, the speed of the gait determines the area of the foot vulnerable to injury. Jogging often produces pain in the heel, while sprinting can result in painful metatarsal heads.⁷ Corns and calluses commonly form on the plantar surface of the foot and are due to excessive pressure. Elimination of the pressure points and proper padding are the recommended treatment for these conditions.⁸

The plantar fascia is a strong supportive band that runs from the os calcis posteriorly and fans out to the metatarsal heads. This structure can be torn with repetitive stress (Fig. 9). The tear usually occurs just anterior to the os calcis and on the medial side of the foot. The athlete complains of pain on weight-bearing and may be incapacitated. A chronic situation usually develops. This injury is not uncommon in basketball and track. Examination reveals marked tenderness at the site of the tear. Initial treatment is to relieve weight-bearing stress. Ice and anti-inflammatory medications are usually ineffective. As pain subsides, stretching the fascia by having the athlete "roll" the arch of the foot over a round object is indicated. A rolling pin can be used for this; glass objects,

such as a coke bottle, should not be used since breakage could produce a laceration. In resistant cases, surgical interruption of the plantar fascia is indicated. Healing by granulation tissue takes four to six weeks and rehabilitation is prolonged.

A common complaint in athletes, as well as non-athletes, is pain under the heel on weight-bearing. A stress fracture of the os calcis must be ruled out by x-ray, but more commonly, the area of pain is localized to the anterior aspect of the heel. The pathology in this case is

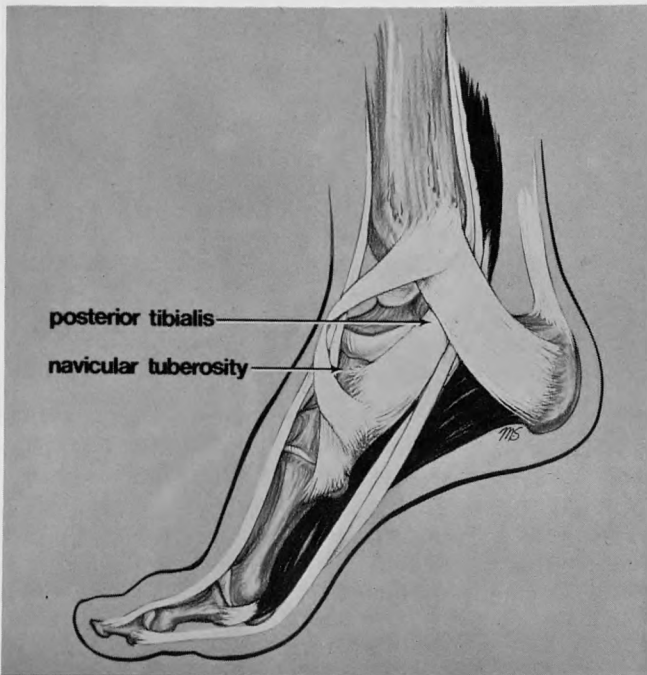


Figure 8. Medial illustration of the foot

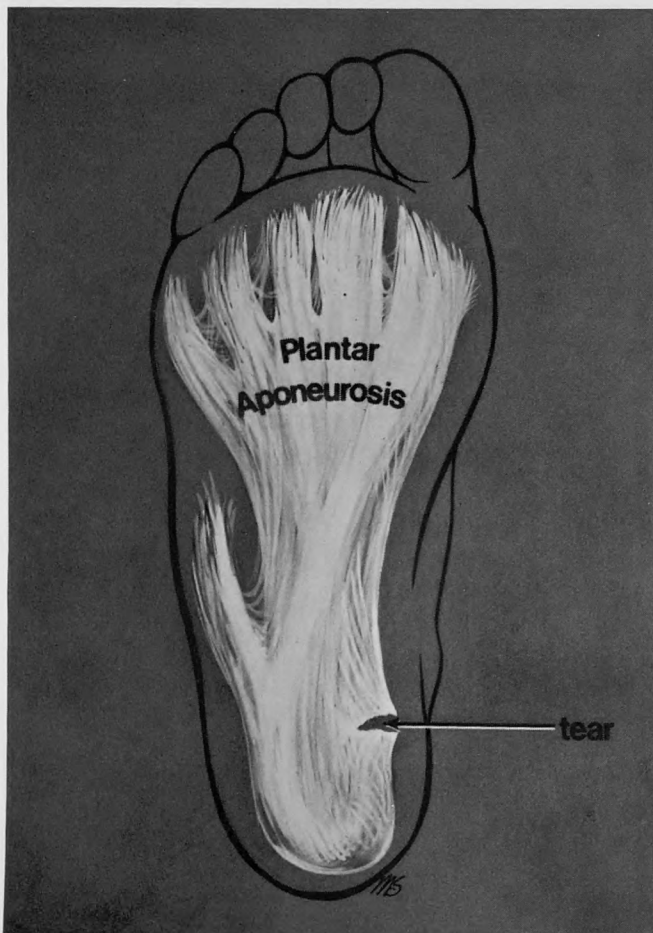


Figure 9. Illustration of plantar fascia

inflammation of the origin of the plantar fascia on the os calcis, a condition referred to as "plantar fasciitis." The inflammation is produced by an undue amount of stress on the fascia. This undue stress is secondary to tight Achilles tendon which serves to "flex" the os calcis. This condition may be bilateral.

Excruciating pain on standing as the patient rises from bed in the mornings is a consistent complaint. Likewise, each time the heel is non weight bearing for a period of time, and then weight is applied, pain occurs. Examination reveals point tenderness at the anterior aspect of the os calcis. Treatment is to correct the stress by encouraging flexibility in the tendo-Achilles. The heel cord should be stretched with the foot in fifteen degrees of internal rotation. Raising the toes accentuates the stretch. Protective heel cups also help by redistributing the stress applied to the heel. Ice and medication are not usually indicated in the treatment of plantar fasciitis.

Two sesamoid bones are found in the two heads of the short great toe flexor muscle as it passes inferior to the 1st metatarso-phalangeal joint. These structures, especially the medial one, are subject to compressive forces in running or jumping. A fracture may occur - and stress fractures of these small bones have been described. more commonly, however, they become inflamed and this is termed "sesamoiditis." The athlete complains of pain on "push-off" or "toe-up." Tenderness will be present. Treatment calls for a redistribution of weight by padding, such as a metatarsal pad or bar, proximal to the inflamed area. In the acute phase the use of crutches to encourage rest from weight-bearing may be necessary.

The anterior surface of the foot is covered with thin sensitive skin (Fig. 10). Contusion is the most common mechanism of injury. Complications arising from the contusion are usually more significant than the contusion itself. Nerve, tendon and blood vessel tissue are superficial and chronic pressure can produce prolonged

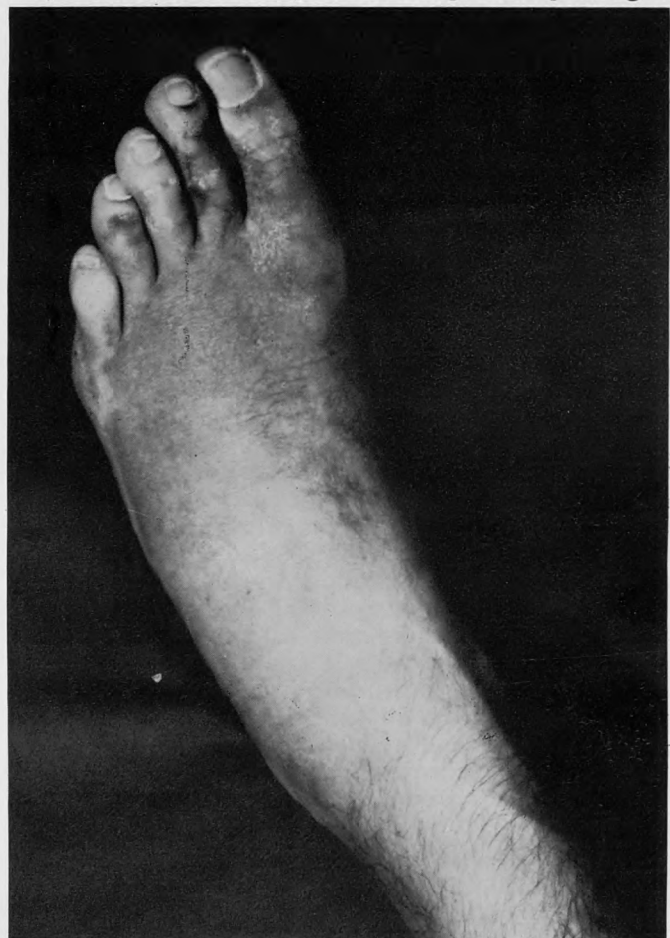


Figure 10. Sensitive skin of the anterior foot

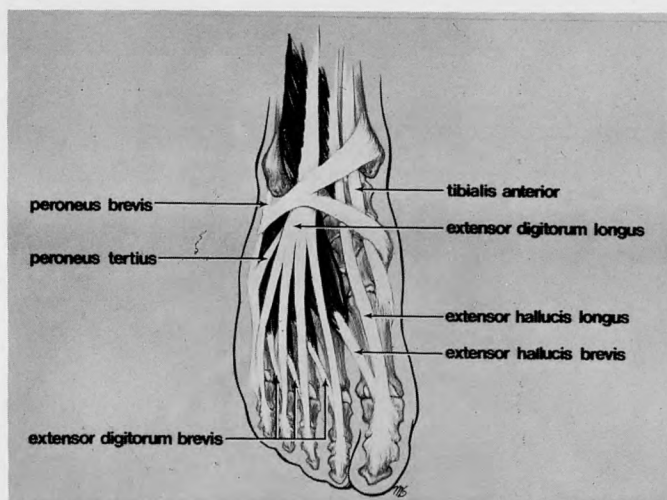


Figure 11. Illustration anterior tibial tendon

complaints. Treatment calls for a relief of pressure to reduce symptomology.

The anterior tibial tendon is the most common site of tendinitis on the dorsum of the foot (Fig. 11). Repeated stressful dorsiflexion produces inflammation and pain. Rest, ice and anti-inflammatory medications serve to alleviate the acute episode. Arch supports and supportive arch taping may be helpful in the chronic stage. It should be understood by the athlete that his street shoes, as well as the athletic shoes, should have adequate arch support.

The metatarsal bones are joined by a complex mechanism of ligaments. On rare occasions, these ligaments tear and a subluxation of the metatarsals occurs. The mechanism of injury is varied and inconsistent, however acute pain at the time of the subluxation is consistent. Diffuse tenderness and swelling are common physical findings. The separation most commonly experienced occurs between the first and second metatarsals and is termed "intermetatarsal diastasis." A critically evaluated x-ray reveals the diastasis. This injury is debilitating to the athlete as weight-bearing is extremely painful. Reduction of the subluxation may be accomplished but treatment protocol remains the same with or without reduction. Plaster immobilization for three weeks is usually necessary to decrease the pain. Rehabilitation is slow, and a return to competition usually takes four to six weeks.

Forefoot dislocations can occur with severe forces. Pain is immediate, deformity is obvious and ambulation is nearly impossible. Closed reduction can usually be accomplished, but interposing soft tissues such as the anterior tibial tendon can inhibit closed reduction necessitating open surgery. The return to competition following these injuries usually requires several months if the athlete is to return to peak performance.

Toe injuries are becoming more common with the advent of the flexible shoe in football, but also can occur

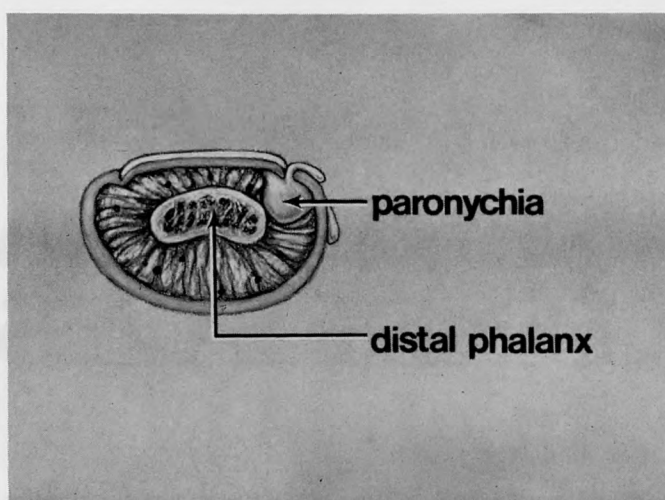


Figure 12. Paronychia of the toe

in sports where tennis shoes are worn. Acute dorsiflexion or plantar flexion of the great toe will tear the capsule of the metatarsophalangeal joint producing a swollen, painful "Astro Toe." This injury may prove more debilitating than an ankle sprain. Treatment of choice is rest. The swelling and pain on range of motion resists the effects of externally applied cold and anti-inflammatory drugs. A return to athletics is usually not accomplished for three to four weeks.

Infection around a toenail, most commonly the great toe, is termed a "paronychia." (Fig. 12). Although this does not incapacitate the athlete, a chronic painful toe can decrease performance levels. The infection is often caused by rolling the nail under the lateral expansion of the soft tissue of the toe. The infection then becomes "trapped" and acute inflammatory symptoms develop. A slow purulent drainage is common. Treatment requires exacerbation of accumulated pus. This may be accomplished by warm soaks in a sterile solution. Application of cotton under the corners of the nail may help. Serial changes of white - non dyed - socks after the soaks are advocated. If these measures fail, surgical excision of the nail may be necessary to drain the infection.

Ligamentous injuries of the great toe are rare⁹, but can occur if the toe is forcefully abducted. Surgical reattachment may be necessary if closed reduction does not produce stability. Plaster immobilization for six weeks is then indicated.

In summary, soft tissue injuries to the foot are common, are often overlooked. Repeated contusions and forceful stresses usually produce minor injuries, but "minor" injuries can become debilitating to the athlete who repeatedly traumatizes the weight-bearing foot. The best treatment is early recognition and elimination of repeated stress. This can prevent the development of chronic painful foot problems which often result in lost time to the athlete. +

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PRESIDENTIAL CANDIDATES



BOBBY BARTON

Bobby Barton has been the Athletic Trainer at Eastern Kentucky University (Richmond, Kentucky) since 1976. He graduated from Robert E. Lee High School (Baytown, Texas) in 1963. He received his Bachelor of Arts degree in Biological Science and Physical Education at the University of Kentucky (Lexington, Kentucky) in 1968, his Master of Science degree in Physical Education and Special Education at Marshall University (Huntington, West Virginia) in 1970, and his Doctor of Arts degree in Physical Education and Psychology at Middle Tennessee State University (Murfreesboro, Tennessee) in 1975. He has completed additional graduate work at the University of Cincinnati, the University of Kentucky, and Eastern Kentucky University. He is married to the former Jojean Chestnut of Lexington, Kentucky and they are the parents of one son, Brian Robert.

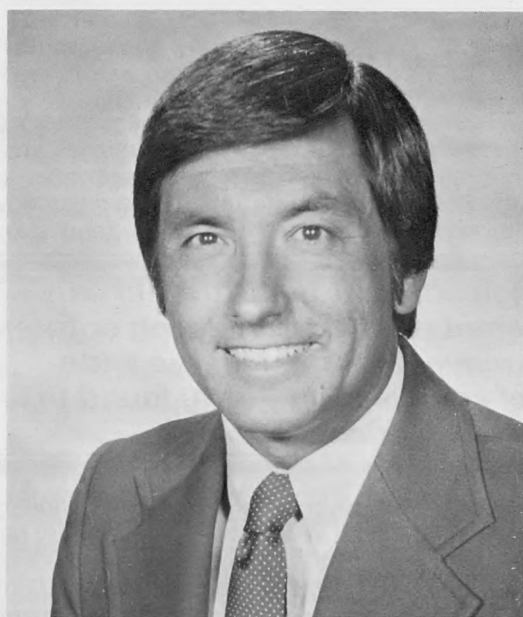
Mr. Barton began his training career working as a student trainer at the University of Kentucky (64-68). He continued as a graduate assistant trainer at Marshall University (68-69). He held the position of assistant athletic trainer at the University of Florida from 1970 to 1972. Prior to going to Eastern Kentucky University, he served as an athletic trainer and instructor at Florida International University (72, 73 and 75), and the University of Kentucky (75-76). He spent the 1973-1974 academic year at Middle Tennessee State University participating in graduate study

sponsored by a university fellowship. He has also served as a trainer for the Kentucky High School All Star Games, the West Virginia Basketball Tournament, the Florida High School All Star Games, the Tennessee High School All Star Games, the National Invitational Basketball Tournament, the NCAA Mid-East Tournament, and the NCAA Division 1-AA Football Championship Game. Mr. Barton is a member of several professional organizations, and has made numerous presentations in Kentucky and other surrounding states.

Bobby has been a member of the NATA since 1970, and has served the Board of Directors since 1977. He served as the NATA representative to the American Council on Education's Commission on Collegiate Athletics and on the NATA-APTA Task Force on Licensure. He has also served on the NATA Placement Committee, the District 9 Executive Committee, and the NATA Licensure Committee. In 1979, Barton served as Convention Chairman for the 30th Annual Meeting and Clinical Symposium and also co-authored Kentucky House Bill 86, which provided the procedure used by the Kentucky Board of Medical Licensure to certify athletic trainers in the Commonwealth of Kentucky.

Mr. Barton served as Vice-President of the NATA in 1980 and 1981 and is presently Head Athletic Trainer and Associate Professor at Eastern Kentucky University.

NATIONAL ATHLETIC TRAINERS ASSOCIATION



DONALD A. CHU

Don Chu graduated from California State University, Hayward in 1967 with undergraduate degrees in Biology and Physical Education. During his collegiate career he was a defensive back holding both single season pass interception and longest kickoff return records.

In 1968, Don entered Physical Therapy school at Stanford University where he became interested in Athletic Training. He was certified by the NATA in 1970. Offered the position of head trainer at Hayward upon his graduation, Don returned to his Alma Mater where he now holds the title of full Professor in the Department of Kinesiology. In addition to managing the Athletic Training facility Don returned to Stanford in 1970 to begin work on his doctorate. He received his Ph.D in Physical Therapy and Physical Education in 1973.

Don has a variety of practical experiences at all levels of Athletic Training having direct contact with Professional Basketball (ABA) and Professional Soccer (Oakland Stompers) in addition to his work at Hayward. He has used these activities to weld together theory and experience combined with innate leadership ability in working for NATA. He has taught and worked at all levels of education including such things as consultant to the Hayward Unified School District on athletic injuries, visiting

lecturer at Stanford University and visiting tutorials to Mexico and Canada sport injury problems.

A definite advocate of the Athletic Training profession, Don has been the major force behind the option in Athletic Training within the Kinesiology major at CSU, Hayward. He has been a constant reminder to the general public and his professional peers that Athletic Trainers are professionals. By virtue of his tremendous number of personal appearances and professional presentations, Don has been involved in the promotion of the body of knowledge associated with Athletic Training for the past twelve years. His contributions to the National Athletic Trainers Association include Program Chairman for two National Conventions (Disneyland and Las Vegas), President of the Nor-Cal Trainers Association from 1974-1980 and Director of District 8 NATA from 1978-1980. Don has worked for the Licensure Committee in California and on a national basis (NATA-APTA task force). He supports the concept of licensure for Athletic Trainers fully. He has worked on several Ad Hoc committees including liaison communication with the American Physical Therapy Association. Presently, he is chairman of the Long Range Planning Committee which is instrumental to the future goals and direction pursued by the NATA. +

Back to Reality: Athletic Training at the High School Level

Charles E. Emerick, MS, ATC, John W. Schrader, MS, ATC

Many student athletic trainers who graduate from a college or university with a well-established sports medicine program find employment as athletic trainers at the high school level. Although it is at this level of athletics where highly skilled trainers are most needed, many recent graduates may not be aware of the differences in working atmospheres at the two levels. It is the intent of the authors to discuss some of the subtle, and not so subtle, differences. This information may help to prevent cultural shock that can easily occur.

Athletes

Probably the most startling difference between college and high school athletic training is in the athletes themselves. The high school athlete's age, experience, strength, skill and emotional characteristics present a totally new atmosphere in which to work. While a collegiate athletic team is composed of a select group of highly skilled post-puberty athletes, a high school team may be composed of young men and women who are going through various phases of physical maturity. Many of these youngsters, 14 and 15 years of age, have not developed enough strength to adequately compete in interscholastic athletics and certainly not enough strength to avoid injuries. Some have never competed before in organized athletics and are simply playing because their friends are on the team. Other students are participating to please coaches and parents who may be mandating their involvement.

The high school athletic trainer can find a great deal of satisfaction or frustration when dealing with the wide range of emotional maturity found in high school students. Being close to the pubescent age, the athletes are very aware of their bodies and seem to be continually trying to establish their social and sexual identities. The athletic trainer, when appropriate, needs to be very careful to allow the athlete to have some involvement in the decision-making processes, while at the same time, remembering the ultimate decision must be made with the best health interests of the athlete in mind.

Another obvious difference between the two sets of

Mr. Emerick currently is employed as the District Athletic Trainer, Peoria Public Schools, Peoria, Illinois. Mr. Schrader is currently Coordinator of Athletic Training Programs at Indiana University and past Chairperson of the NATA Professional Education Committee.

athletes is the manner in which injuries are accepted. Most college athletes accept the fact that injuries are a part of competition and recognize the importance of proper treatment and rehabilitation. The anxiety surrounding injuries does not seem to be as great since

"The high school athletic trainer can find a great deal of satisfaction or frustration when dealing with the wide range of emotional maturity found in high school students."

many have experienced trauma to some degree previously.

In comparison, the high school athlete frequently has never suffered an injury and has no idea of what is happening to his/her body. Evaluation is often difficult because of the accompanying anxiety that can distort any findings. This anxiety over being injured may explain why an athlete writhing in agony one minute is sprinting back to his/her position the next. The presence of spectators often contributes to overreacting to injury.

Peer pressure to return to participation, especially for the starter, appears to be greater at the high school level. The injured athlete's teammates want him/her to "shake it off" and get back into the contest, as the athlete is perceived to be desperately needed. This pressure often makes the athlete feel obligated to "give it all" for the team regardless of personal and permanent injury that could result. On a collegiate team with more depth in positions, this is not as common.

Recognition of the importance of proper rehabilitation procedures is also an area of difference between levels. The college athlete is constantly reminded of its importance by the sports medicine staff while the high school athlete has had no one to emphasize proper rehabilitation or conditioning. Because they have not been exposed to an athletic trainer, high school athletes are not aware of the benefits of an immediate and conscientious rehabilitation program. Sometimes, athletes at this level may not be so anxious to return to activity for a number of reasons. Some want to save themselves for their "better" sport, such as a football player waiting until basketball practice begins. Occasionally, a few individuals appear to be injured, but in reality, have a fear of failure. Or, they

may find this as a means of escaping the "pushing" parent. And finally, there is a small percentage of athletes whose parents remove them from the sport so they won't be injured again.

Physicians

Most colleges have at least one physician who is a member of the staff and acts as the team physician. This individual is usually well-versed in the field of sports medicine and keeps abreast of the latest developments. At larger universities, specialists play a significant role on the sports medicine team. Should the need arise, injured athletes have almost immediate access to the services of an orthopedist, neurologist, ophthalmologist, gynecologist, and so on.

At the high school level, there may not even be a team physician — certainly not for sports other than football. If there happens to be a team physician, the person may be available for games only. While many states require by law that a physician be present at all varsity football contests, in other states the newly employed athletic trainer may find their presence to be the only "medical" source available.

Traditionally, each family has a physician who treats all illnesses and injuries to that family. This physician is frequently a pediatrician or family practitioner with enough demands on their time without having to keep up-to-date with the aspects of sports medicine. If this is the case, the high school athlete may be treated very conservatively, which may cause prolonged time loss and/or a season. Furthermore, these physicians are frequently not familiar with rehabilitation procedures and

"Another difficulty . . . is getting people to recognize the professional preparation of today's athletic trainer."

may overlook this vital aspect of treatment.

Some physicians may perceive a newly employed high school athletic trainer as an individual trying to "play doctor." With these individuals, it is the responsibility of the athletic trainer to let the physician know how a certified athletic trainer can function under the auspices of a medical doctor. Obviously, when the physician and trainer get to know and trust each other, the athletes under their care will begin to receive consistent sports medicine care.

Parents

A difference that is not quite as obvious at the beginning, but soon becomes so, is the presence of parents. When a college athlete suffers a non-surgical injury, the trainers and physicians are directly responsible and can proceed immediately with the most modern treatment for that injury. At the high school level, the parents may only want to see a certain physician, or go to several doctors until they get the answer they want to hear. Parents may also disregard the advice of trainers or coaches and employ remedies they have used in the past — hot epsom salt soaks on an acute ankle sprain, for example. There are occasionally parents who will simply refuse recommendations to see a doctor because they do not deem the injury to be significant.

Coaches

The vast majority of high school coaches are genuinely concerned with the athlete's safety. Often, high school coaches have to serve as equipment managers, bus drivers, locker room monitors, and business managers, as

well as trainers. Consequently, they simply do not have the time or resources to keep abreast and as a result, are not current in athletic training procedures. Similarly, they generally do not have access to other experts in sports medicine, such as the exercise physiologist, specialty physicians, biomechanist, and so on.

The reception for a newly employed high school athletic trainer will usually be positive. As a rule, most coaches are very pleased with the trainer's presence and readily accept new ideas. One will occasionally encounter a coach, however, who will reject the recommendation of a safer method of treatment because they have been doing it another way for as long as they have been coaching. For example, a high school football coach in the state of Washington was advised that he should purchase a bolt cutter as part of his standard sideline equipment. All of the school's football helmets were equipped with bolted on facemasks, which causes an obvious problem in the event of an airway access emergency. He answered that he had been coaching for seventeen years now and couldn't ever remember a time when he would have needed to use one!

Equipment & Facilities

Generally, a high school setting will not have the extensive space and equipment of large college or university programs. However, there are many examples of high school training rooms that are better equipped than small colleges. This situation obviously depends on financial status, attitude of the administration, booster clubs, and amount of community support.

Job

High school athletic trainers must be aware of their limitations at this level. While the college trainer has immediate supervision of a team of physicians, the high school trainer is frequently not as fortunate. Therefore, such relatively minor procedures, such as draining blisters, debriding dead tissue or callouses, or dispensing aspirin, may be beyond the scope of the high school trainer. These are practices that should be clarified with the school administration and team physician upon employment.

Another difficulty at the high school level, especially for the first trainer ever hired, is getting people to recognize the professional preparation of today's athletic trainer. As a recent college graduate, a trainer is exposed to techniques for handling athletic injuries which are based on the most current information. This information is often in direct conflict with the emergency room physician, who, for example, counsels the athlete to immediately apply heat to a freshly sprained ankle or the ambulance attendant who removes a compression wrap on the ankle/leg area and replaces it with a "figure of eight" first aid wrap. Incidents such as these will disappear with the time it takes to get acquainted and gain the respect of the appropriate parties.

Conclusion

Although this paper has discussed many less than desirable points about athletic training at the high school level, the authors feel the positive aspects certainly outweigh them. Working with athletes, coaches, and administrators at this level is a very rewarding and satisfying position. The problems cited above will probably occur sometime during employment in a high school, but certainly not every day. If the certified athletic trainer is aware of potential problems, and realizes why they occur, he/she can more readily deal with them. As the trainer becomes a recognized entity within the school system and is respected for his/her expertise, the ideas which originally were accepted only by "hard sell" will be asked for regularly. +

A Tip From the Field

Orthotron Hip Rehabilitation

Jonathan M. Cooperman, BS, RPT
and
Perry S. Esterson, MS, RPT, ATC

Many colleges and some high schools now have an Orthotron* in their training rooms. This tool can be used for rehabilitation of extremity muscle groups. Nicholas et al (1) have described the need for total lower extremity rehabilitation, especially following knee surgery. Isokinetic strengthening of the musculature of the hip can usually be started quite early in the course of an athlete's rehabilitation. Because of the biarticular properties of the rectus femoris and hamstrings, they can be exercised via the hip, with minimal stress on the knee.

We at the Center for Sports Medicine have devised a quick, simple and effective way of setting up the Orthotron for hip rehabilitation, not described by Lumex, Inc. Hip flexion/extension (figure 1) and abduction/adduction (figure 2) can be performed in standing position. The athlete stands on a three inch cinder block in order to clear the involved leg from the floor. The Orthotron actuator is raised so that the input axis is aligned with the hip axis of rotation. The Orthotron is brought out two to three feet from the bench to allow for counterforce stabilization of the contralateral limb. The thigh pad with its longer strap is placed against the distal thigh, and the athlete is ready to exercise. Because of the high torque produced by the hip extensors, settings below 4 should be avoided.

This relatively easy way to exercise the hip can save time and energy on the part of the trainer, and adds to the total rehabilitation of the athlete.

*Cybex, Division of Lumex, Inc., Ronkonkoma, N.Y. 11779

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- (1) Gleim GW, Nicholas JA, Webb JN: Isokinetic evaluation following leg injuries. *The Physician and Sports Medicine* 6(8): 78, 1978

Mr. Cooperman & Mr. Esterson are staff members at the Center for Sports Medicine, National Hospital for Orthopaedics & Rehabilitation, 2455 Army Navy Drive, Arlington, Va. 22206.

Editor's Note: Anyone wishing to have an idea, technique, etc. considered for this section should send one copy to **Ken Wolfert, 111 Buckeye Street, Hamilton, Ohio 45011**. Copy should be typewritten, brief, and concise, using high quality illustrations and/or black and white glossy prints. +

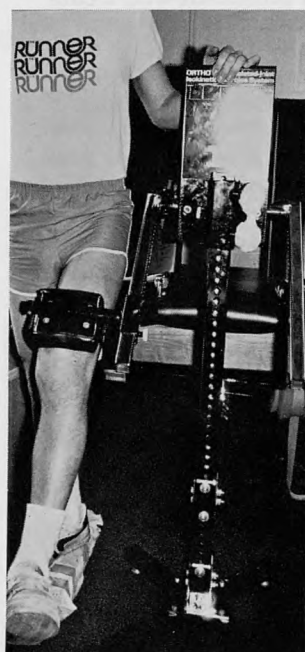


FIGURE 1

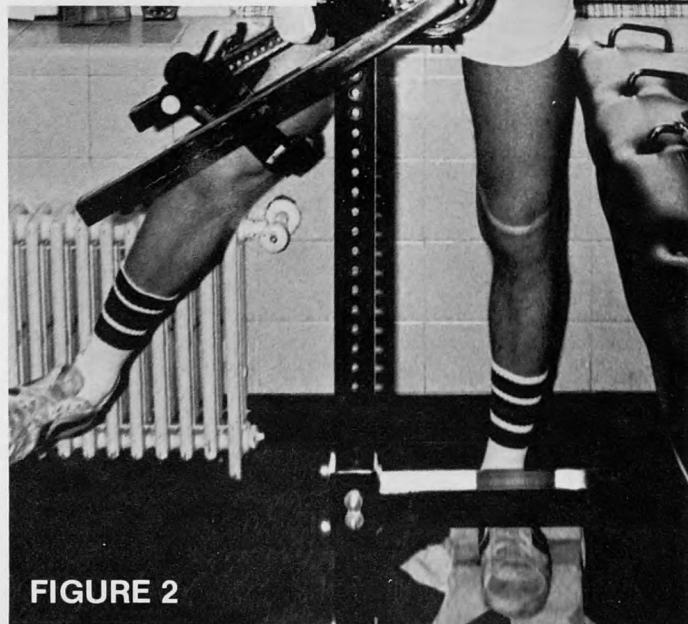


FIGURE 2

A Message From the Board of Certification . . .

In this issue of *Athletic Training* you will find the most current information concerning the certification process of the National Athletic Trainers Association. The Board of Certification during the past year began to address a number of concerns, many of which you, the professional athletic trainer, have conveyed to the committee.

Included in this supplement to the journal are the following:

- (1) Current NATA Procedures for Certification
- (2) Revised Competency Evaluation Form
- (3) Sites, Dates, and Deadlines for the 1982 certification examinations, and the
- (4) Board of Certification District Representatives

There has been a number of changes regarding certification procedures so please review and discuss the procedures with your students. If you have any questions please contact me or your district representative in writing. I'm sure you realize it is somewhat difficult to document telephone conversations at a later date.

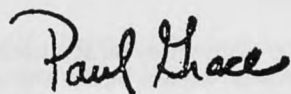
The revised Competency Evaluation Form, the Board of Certification believes, will better assist the student preparing for the examination, and provide the supervising certified athletic trainer a format to follow in structuring part of the student learning experiences.

Each district of NATA has one or more district representatives. These members, in addition of administering the examinations are also responsible for answering or directing questions you may have. Utilize their expertise when needed.

Beginning January 1982, Professional Examination Service, our testing consultants, will begin a role analysis of the athletic trainer. Many of you, the certified athletic trainer, will be contacted to provide input into this study; Please give attention to this. Additionally, the oral/practice section of the examination has been revised by PES and will be implemented for the January test.

In closing, I want to take this opportunity to thank those members who during the past year have assisted with our certification process. Additionally, I again want to emphasize that, if you have a question or concern please feel free to contact your district representative or my office.

Sincerely,



Paul Grace
Chairperson, Board of Certification

PROCEDURES FOR CERTIFICATION AS APPROVED BY THE BOARD OF DIRECTORS

JUNE 1981

**NATIONAL ATHLETIC TRAINERS ASSOCIATION
BOARD OF CERTIFICATION
PO BOX 1865
GREENVILLE, N.C. 27834-0413**

TO BECOME CERTIFIED AS AN ATHLETIC TRAINER BY THE NATIONAL ATHLETIC TRAINERS ASSOCIATION, A CANDIDATE MUST MEET THE CORE REQUIREMENTS, AS WELL AS THE REQUIREMENTS STATED IN THE SECTION UNDER WHICH THE CANDIDATE IS APPLYING.

THE CORE REQUIREMENTS OF THE NATA CERTIFICATION WHICH MUST BE FULFILLED BY ALL CANDIDATES ARE:

- (1) Proof of continual membership for 12 months prior to the closing date of requesting an application for the desired certification examination, either as a Student or Associate member.
- (2) Student members of the NATA may continue this classification for 12 months from the date of their undergraduate graduation.
- (3) A person may be a student member for no more than two calendar years after the year he/she becomes eligible for student membership as a graduate student.
- (4) Verification of an Associate member's status is required before the application will be processed.
- (5) Proof of current Standard First Aid and CPR certification, EMT-equivalent.
- (6) Presentation of a Competency Evaluation Form endorsed by an NATA Certified Athletic Trainer.
- (7) Completion of Section D of the Certification Application by your endorsing Certified Athletic Trainer.
- (8) For section II, III, and IV candidates; a letter of recommendation from an NATA Certified Athletic Trainer.
- (9) For section II, III, and IV candidates; a letter of recommendation from acting team physician.
- (10) Proof of graduation (official transcript) from a college or university. Students in their last semester of school are eligible to take the certification examination provided the CORE and Section Requirements have been fulfilled at the time

of application. Certification will not be awarded until the Board of Certification is presented with official proof of graduation.

SECTION REQUIREMENTS

Section I: Graduate of an NATA APPROVED CURRICULUM

Section II: APPRENTICESHIP

Section III: ACTIVELY ENGAGED CERTIFIED

Section IV: PHYSICAL THERAPY DEGREE GRADUATE

Section I

THE STUDENT MUST HAVE CONTINUAL COMMUNICATION AND DIRECTION, ON A DAILY BASIS, WITH A NATA CERTIFIED ATHLETIC TRAINER.

- A - Have spent a minimum of 800 clock hours over a minimum of two years and not more than four years in an NATA approved educational program.

Of these 800 hours, 700 hours must be attained at the collegiate, professional, or interscholastic level, working in the athletic training setting under the direct supervision of an NATA Certified Athletic Trainer.

The additional 100 hours may be attained from the acceptable related areas, under the direct supervision of an NATA Certified Athletic Trainer.

- B - No more than 400 clock hours can be credited for one year.

ACCEPTABLE HOUR GUIDELINES

Please Note:

In order for hours to be credited for certification purposes, they must be attained under the direct supervision of a NATA Certified Athletic Trainer.

The hours must be worked in connection with programs by which the supervising certified athletic trainer is employed.

Acceptable Hours:

- (1) Hours spent at organized team practices and contest. (professional, collegiate, or interscholastic)
- (2) Hours spent teaching or lecturing in athletic training.*
- (3) Hours spent in practicums and labs related to athletic training.**
- (4) Hours spent working in sports medicine clinics or centers.**
- (5) Hours spent in other allied health areas.**

*Verification from the department chairperson and supervising certified athletic trainer must state amount of hours spent, course content and mode of measurement.

**In order to receive credit for hours spent in sports medicine clinics or centers, please request that the establishment send for the NATA Athletic Training/Sports Medicine Clinical Affiliation application. Please note: No hours will be accepted by applicants from centers that were not first approved by the Board of Certification.

Non-acceptable Hours:

- (1) Hours spent in a program not supervised or directed by an NATA Certified Athletic Trainer.
- (2) Time spent travelling with teams.
- (3) Academic hours.
- (4) Hours spent in sports medicine clinics or centers that are not first approved by the NATA Board of Certification.

Section II

- A - Have spent a minimum of 1800 hours over a minimum of two years and not more than six years under the direction of an NATA Certified Athletic Trainer.

Of these 1800 hours, 1600 hours must be attained at the collegiate, professional, or interscholastic level working in the Athletic training setting under the direct supervision of an NATA Certified Athletic Trainer.

The additional 200 hours may be attained from the acceptable related areas under the direct supervision of an NATA Certified Athletic Trainer.

- B - No more than 900 clock hours can be credited for one year.

ACCEPTABLE HOUR GUIDELINES

Please Note:

In order for hours to be credited for certification purposes, they must be attained under the direct supervision of a NATA Certified Athletic Trainer.

The hours must be worked in connection with programs by which the supervising certified athletic trainer is employed.

Acceptable Hours:

- (1) Hours spent at organized team practices and contest. (professional, collegiate, or interscholastic)
- (2) Hours spent teaching or lecturing in athletic training.*
- (3) Hours spent in practicums and labs related to athletic training.*
- (4) Hours spent working in sports medicine clinics or centers.**
- (5) Hours spent in other allied health areas.**

*Verification from the department chairperson and supervising certified athletic trainer must state amount of hours spent, course content and mode of measurement.

**In order to receive credit for hours spent in sports medicine clinics or centers, please request that the establishment send for the NATA Athletic Training/Sports Medicine Clinical Affiliation application. Please note: No hours will be accepted by applicants from centers that were not first approved by the Board of Certification.

Non-acceptable Hours:

- (1) Hours spent in a program not supervised or directed by an NATA Certified Athletic Trainer.
- (2) Time spent travelling with teams.
- (3) Academic hours.
- (4) Hours spent in sports medicine clinics or centers that are not first approved by the NATA Board of Certification.

Section III

A person may be granted certification under this section by:

1. Proof of 5 years of athletic training experience, after graduating from college on the undergraduate level, provided that it would meet the minimum of one of the following requirements:
 - (a) graduate of an NATA approved faculty-athletic trainer educational program.
 - (b) a minimum of one year apprenticeship (800 hours*) under the direct

supervision of a certified athletic trainer. *See Section I requirement - A.

- (c) providing proof of equivalent coursework to that of an NATA approved curriculum graduate. If this method is selected, the applicant must submit his/her academic (official) transcripts for approval, a minimum of 12 months prior to the anticipated date of examination.

ACCEPTABLE HOUR GUIDELINES

Please Note:

In order for hours to be credited for certification purposes, they must be attained under the direct supervision of a NATA Certified Athletic Trainer.

The hours must be worked in connection with programs by which the supervising certified athletic trainer is employed.

Acceptable Hours:

- (1) Hours spent at organized team practices and contest. (professional, collegiate, or interscholastic)
- (2) Hours spent teaching or lecturing in athletic training.*
- (3) Hours spent in practicums and labs related to athletic training.*
- (4) Hours spent working in sports medicine clinics or centers.**
- (5) Hours spent in other allied health areas.**

*Verification from the department chairperson and supervising certified athletic trainer must state amount of hours spent, course content and mode of measurement.

**In order to receive credit for hours spent in sports medicine clinics or centers, please request that the establishment send for the NATA Athletic Training/Sports Medicine Clinical Affiliation application. Please note: No hours will be accepted by applicants from centers that were not first approved by the Board of Certification.

Non-acceptable Hours:

- (1) Hours spent in a program not supervised or directed by an NATA Certified Athletic Trainer.
- (2) Time spent travelling with teams.
- (3) Academic hours.
- (4) Hours spent in sports medicine clinics or centers that are not first approved by the NATA Board of Certification.

Section IV

- A - Have spent a minimum of 800 clock hours over a minimum of two years and not more than four

years under the direction of an NATA Certified Athletic Trainer.

Of these 800 clock hours, 700 hours must be attained at the collegiate, professional or interscholastic level, working in the athletic training setting under the direction of an NATA Certified Athletic Trainer.

The additional 100 hours may be attained from the acceptable related areas, under the direct supervision of an NATA Certified Athletic Trainer.

- B - No more than 400 clock hours can be credited for one year.

ACCEPTABLE HOUR GUIDELINES

Please Note:

In order for hours to be credited for certification purposes, they must be attained under the direct supervision of a NATA Certified Athletic Trainer.

The hours must be worked in connection with programs by which the supervising certified athletic trainer is employed.

Acceptable Hours:

- (1) Hours spent at organized team practices and contest. (professional, collegiate, or interscholastic)
- (2) Hours spent teaching or lecturing in athletic training.*
- (3) Hours spent in practicums and labs related to athletic training.*
- (4) Hours spent working in sports medicine clinics or centers.**
- (5) Hours spent in other allied health areas.**

*Verification from the department chairperson and supervising certified athletic trainer must state amount of hours spent, course content and mode of measurement.

**In order to receive credit for hours spent in sports medicine clinics or centers, please request that the establishment send for the NATA Athletic Training/Sports Medicine Clinical Affiliation application. Please note: No hours will be accepted by applicants from centers that were not first approved by the Board of Certification.

Non-acceptable Hours:

- (1) Hours spent in a program not supervised or directed by an NATA Certified Athletic Trainer.
- (2) Time spent travelling with teams.
- (3) Academic hours.
- (4) Hours spent in sports medicine clinics or centers that are not first approved by the NATA Board of Certification. +

The Faults Shoulder Stretch (Developed for use to Quarterbacks, Pitchers, and Other Throwers by Donald J. Faults)

James A. Madaleno, ATC

General Principals to Follow in All the Stretches

1. The stretches should be performed *before* the practice session.
2. Within 15 minutes after the stretches are done, the athlete should begin throwing as he/she would for a normal warm-up.
3. The athletic trainer does all the movement during the routine as the athlete lies relaxed and lets the trainer do all the work.
4. While doing the stretches, it may be necessary to keep reminding the athlete to relax.
5. The muscles should be stretched to their limit. Let pain, though, be the determining factor that the athletic trainer is going too far.
6. It is important that: (A) The stretches be performed by the trainer in their presented order, and (B) The stretches be done one after another for continuity must be a major goal (by continuity we mean that each stretch should overlap its predecessor - i.e. stretch one flows into stretch two, etc...)
7. Vary the number of stretches to fit the athlete. Some need more than others, some less. Use your professional judgement.
8. Show the arm stretch to your athletes. *Don't insist on it's use.* Let them make up their own minds. However, if you feel someone needs it, and they are hesitant or resisting, a little *suggestive selling* may get them to try it.
9. The stretches and their explanations are for right-handed throwers. Obvious alterations should be made when working with a left-handed thrower.

Special assistance in photography, writing, development, and arrangement of this work include:

Order of Stretches

I. Position One

- a. stretch 1 - "Shoulder Roll"
- b. stretch 2 - "Pectoral Stretch"
- c. stretch 3 - "Shoulder hyperextension"
- d. stretch 4 - "Shoulder hyperflexion"
- e. stretch 5 - "Shoulder Circles"

II. Position Two

- a. stretch 6 - "The Pump" Stretch
- b. stretch 7 - "Elbow Circles"
- c. stretch 8 - "Wrist Circles"
- d. stretch 9 - "Knuckle Pops"
- e. stretch 10 - "Arm Waves"

Position One:

The athlete lies on his side facing the athletic trainer. His throwing arm is held at the side and his head rests flat on the non-throwing arm.

Stretch 1: Shoulder Roll

Place the pitcher's arm on the athletic trainer's left

forearm. The athletic trainer cups the pitcher's shoulder with both hands (Figure 1) and rotates the shoulder girdle 10 times clockwise and counterclockwise. The goal is to move the scapula and clavicle, not the humerus. Rotate in a small circle.

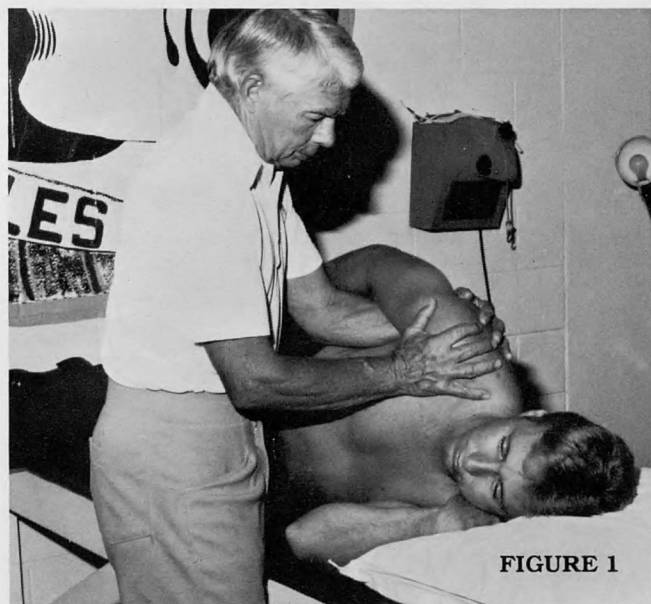


FIGURE 1

For Continuity: (Stretch 1 to Stretch 2)

Flip the pitcher's arm from the trainer's left forearm to the trainer's right forearm.

Stretch 2: Pectoral Stretch

The athletic trainer places his right hand on the athlete's scapula. The athlete's arm is then bent at the elbow and laid along and across the trainer's right forearm so that the humerus is parallel to the table above the head. The trainer rests his left elbow against the athlete's hip and places his left hand on the scapula so that the fingers

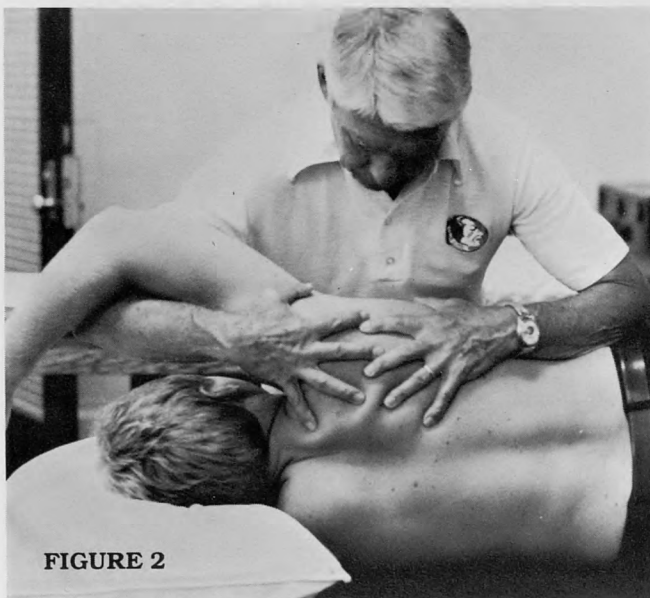


FIGURE 2

Mr. Madaleno is presently a graduate assistant for Mr. Faults who is the Head Athletic Trainer at Florida State University, Tallahassee, Florida 32306.

of his two hands touch (Figure 2). He then pulls the scapula toward him and pushes the arm with his right elbow, making sure that the athlete's arm remains parallel to the table. As the athlete's arm moves behind his head, the trainer may need to lean over the athlete's body. The arm is held on stretch 2-3 seconds, released, and reapplied 3-5 times.

For Continuity: (Stretch 2 to Stretch 3)

Flip the athlete's arm from the trainer's right forearm to the trainer's left hand.

Stretch 3: Shoulder Hyperextension

The athletic trainer places his right hand on the athlete's scapula and grasps the pitcher's right wrist or lower forearm with the left hand (Fig. 3). The athlete's arm is

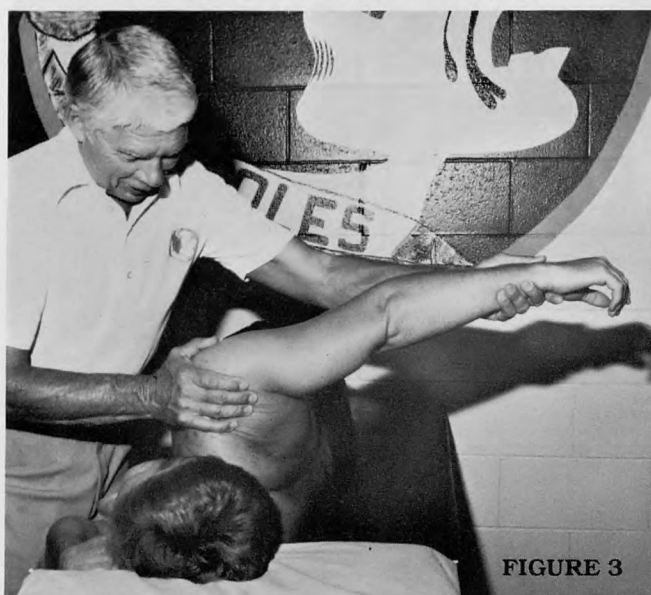


FIGURE 3

then pushed back as far as possible, keeping the elbow straight and the arm parallel to the table. As the arm is stretched back, firm pressure should be applied to the scapula. After 2-3 seconds, release the stretch a little, then reapply it. Repeat 3-5 times.

For Continuity: (Stretch 3 to Stretch 4)

The athlete's arm is transferred from the trainer's left hand to the right hand and brought over the athlete's ear.

Stretch 4: Shoulder Hyperflexion

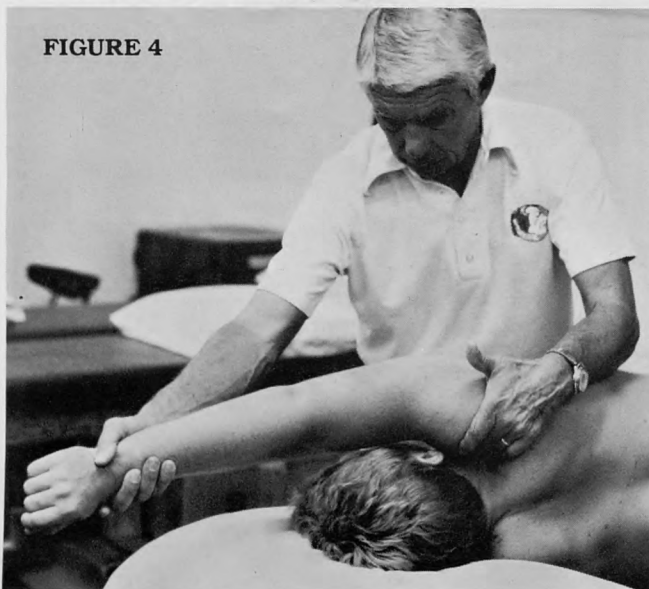


FIGURE 4

The trainer cups his left hand over the top of the athlete's shoulder (Fig. 4). The athlete's right wrist is then grasped with the trainer's right hand. The athlete's arm is then extended over his ear but parallel to the table. The athlete's arm is then pushed down toward the table as far as possible, keeping the elbow straight and the arm parallel to the table. As the arm is stretched down, firm pressure should be applied to the top of the shoulder. (The trainer's left hand is used as a fulcrum). After 2-3 seconds, release the stretch a little, then reapply it. Repeat 3-5 times; each time stretching the arm a little more.

For Continuity: (Stretch 4 to Stretch 5)

The athlete's arm comes from over his ear towards his hip, bending the elbow. The trainer's left hand then cups the athlete's elbow. The trainer's right hand is then placed on the top of the athlete's wrist and then the rotation motion begins with the trainer's left hand pushing the athlete's elbow.

Stretch 5: Shoulder Circles

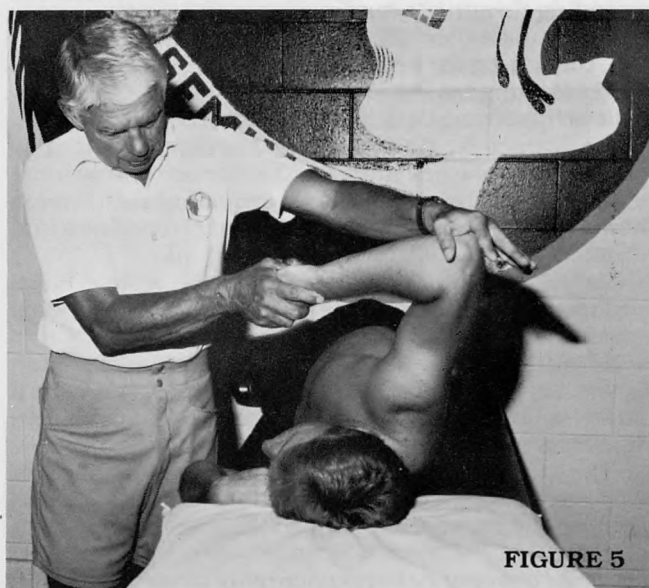


FIGURE 5

With the elbow bent to 90°, the trainer grasps the athlete's wrist with his right hand, and the elbow is cupped with the left hand. Keeping the forearm parallel to the table, rotate the upper arm in as big of a circle as possible, both clockwise and counter-clockwise 5-8 times.

It is important to exaggerate the circle at the top of the arc. Also, a patterned slow speed of movement should be used.

Position Two:

The athlete rolls over onto his back so that the throwing side of the body is at the opposite edge of the table; and the shoulder and arm are just barely off the table's edge.

Stretch 6: "The Pump" Stretch

The athletic trainer, in a crouched position, grasps the athlete's arm just above the wrist with his right hand and lifts it into the air. He slides his left hand up under the arm, through the arm pit, and places it on the athlete's chest (Fig. 6). The athlete's arm is then cradled (supported) by the trainer's anterior elbow joint. Using the trainer's left arm as a fulcrum, the athlete's arm is moved back perpendicular to the body and the trainer pushes the athlete's arm back. The elbow, during this stretch, is in full extension. The stretch is held for 3-4 seconds, relaxed, and repeated 3-5 times.



FIGURE 6

For Continuity: (Stretch 6 to Stretch 7)

The trainer stands up, slides his right hand to the athlete's palm, and his left hand from the athlete's chest to the athlete's elbow and cups it.

Stretch 7: Elbow Circles



FIGURE 7

The athletic trainer grasps the athlete's arm just above the elbow with his left hand and the wrist with his right hand. He then rotates the elbow in as large an arc as possible. Rotate clockwise and counter-clockwise 4-5 times each.

For Continuity: (Stretch 7 to Stretch 8)

The trainer's right hand is slid from the athlete's wrist to the palm and the trainer's left hand from the elbow to just above the wrist.

Stretch 8: Wrist Circles

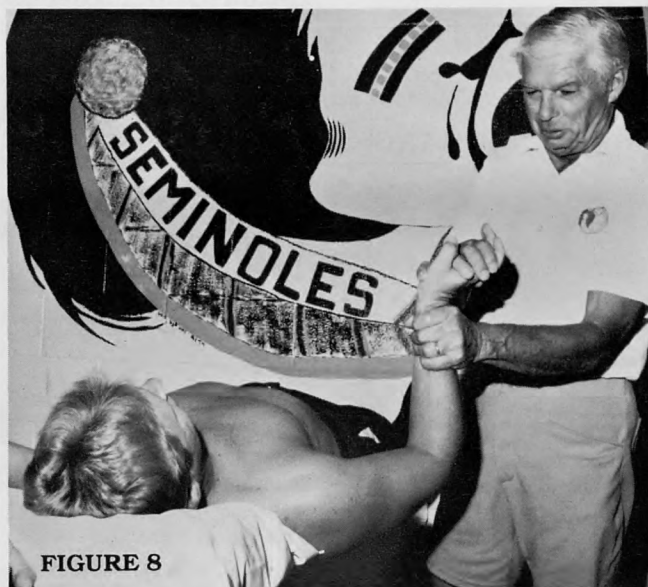


FIGURE 8

The athletic trainer grasps the athlete's arm just above the wrist with his left hand and the athlete's palm with his right hand. He then rotates the wrist clockwise and counter-clockwise 3-5 times.

Stretch 9: Knuckle Pop (No illustration)

The athletic trainer grasps the athlete's hand with his left hand and each finger, one at a time, with his right hand. He then pulls on the finger with moderate pressure. Each finger is pulled only once. It is not necessary to hear a pop.

Stretch 10: Arm Waves

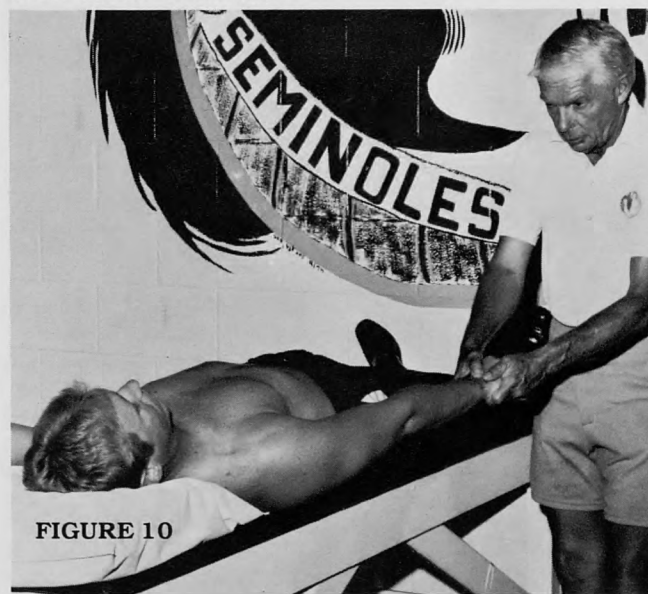


FIGURE 10

The athletic trainer grasps the athlete's hand with both of his hands and lifts up and down causing the athlete's arm to wave. The athlete should be very relaxed and the arm very limp. After 3-5 waves, the athletic trainer throws the arm and hand to the athlete's chest. The arm should flop onto the athlete's chest if he is relaxed.

*Editor's Note: Anyone wishing to have an idea, technique, etc. considered for this section should send one copy to **Ken Wolfert, 111 Buckeye Street, Hamilton, Ohio 45011**. Copy should be typewritten, brief, and concise, using high quality illustrations and/or black and white glossy prints. +*

In Memoriam



DWIGHT E. AULTMAN III
May 19, 1933 — April 6, 1981
University of New Hampshire

Dwight Aultman, head trainer at the University of New Hampshire for the past 15 years, died April 6, 1981 following a long bout with cancer. He was born in Columbia, Missouri and later moved to Coral Gables, Florida.

He received his bachelor's degree in Physical Therapy from the Medical College of Virginia in 1956. Following his graduation, he was the supervisor of the Physical Therapy Department at the Woodrow Wilson Rehabilitation Center in Virginia for 10 years.

In 1966, Dwight was appointed to the head trainer post at the University of New Hampshire. In addition to his training duties, he taught in the physical education department. Dwight was also a co-owner of Seacoast Physical Therapy, a private rehabilitation firm.

Dwight was a member of the National Athletic Trainers Association, the American Physical Therapy Association, the American Registry of Physical Therapists and the National Rehabilitation Association. One of the many honors that Dwight received in his outstanding career was addressing the National Athletic Trainers Convention in Philadelphia in 1980.

For the past several years, Dwight battled cancer and was in and out of the Wentworth Douglass Hospital in Dover, New Hampshire. He is survived by his wife, Shirley, and three children, sons - Dwight and Douglas, and daughter, Sara.

Dwight was a fine trainer. He will be missed by his family, friends, athletes and fellow trainers.

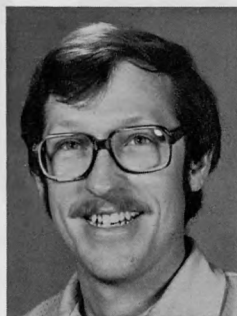
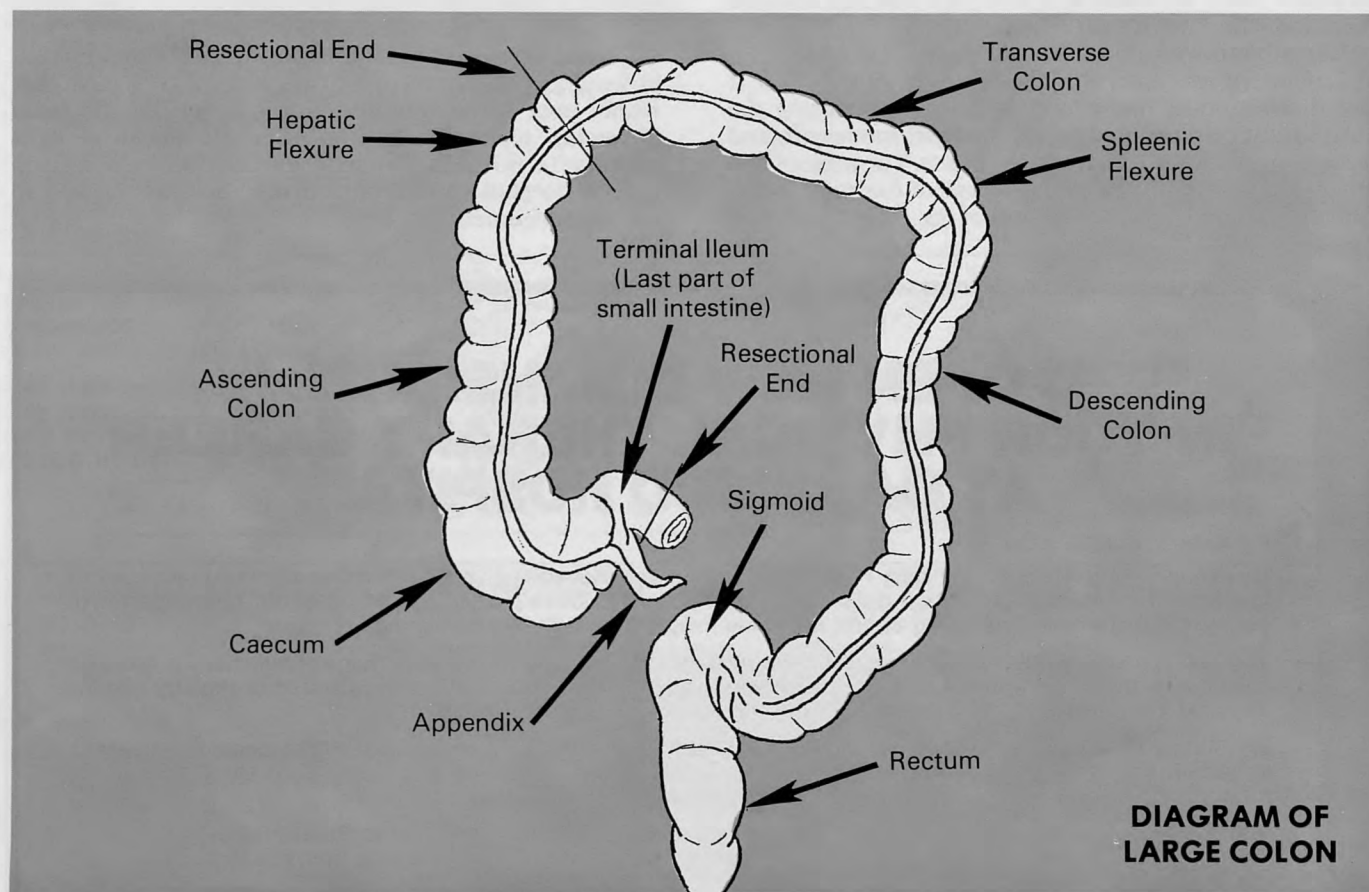
Case History:

Ruptured Colon

Michael Bell, ATC, EMT

Injuries to the abdomen are potentially serious and life threatening. Fortunately there are several signs and clinical symptoms which help to establish the correct diagnosis. The Kehr's sign for rupture of the spleen, abdominal distension, diffuse abdominal rigidity, localized point tenderness, rebound tenderness, shock and lack of bowel sounds for stillstand of intestinal peristalsis are signs of an "acute abdomen" from serious intra-abdominal infection or injury. However, there are times when these symptoms develop very slowly and the patient must be kept under strict observation.

Midway through the second period of a college ice hockey game (9:00 p.m.), a defenseman, while attempting to prevent a breakaway, slid into the anchored goal post. The athlete hit the post on the left side of his abdomen in the nonprotected area between his shoulder and hip pads. Immediately following the injury he appeared to have the "wind knocked out" of him and felt good enough to continue playing. After the game (10:15 p.m.) the athlete complained of abdominal discomfort and was examined by the visiting team physician. There were two abrasions on the upper left quadrant from hitting the post. There were no clinical signs of spleen involvement,



Mr. Bell is an assistant athletic trainer at the University of Minnesota, Minneapolis, Minnesota 55455.

no abdominal rigidity or distension, and bowel sounds were present. The athlete did complain of some discomfort when pressure was applied and released (rebound test) on the right abdomen. The physician indicated that it might be a contusion of the abdominal muscles and instructed the athletic trainer to check for bowel sounds if pain persisted.

At 11:00 and 11:30 p.m. the athlete complained of increased abdominal pain. Bowel sounds were present and there was no abdominal rigidity or distension. If the athlete laid on his stomach or right side the pain was more intense. When placed on his back with the knees

bent and an ice bag on the abdomen, most of the discomfort was relieved.

At 12:10 a.m. the abdominal pain was more intense. Bowel sounds were still present and there was no rigidity or distension of the abdomen. The athlete was given two 5 grain tablets of aspirin for the pain.

The athlete vomited at 12:20 a.m. and the abdominal pain was causing extreme cramping. There still was no abdominal distension or rigidity, but the bowel sounds were no longer present.

At 12:30 a.m. the athlete was transported to the hospital emergency room for evaluation and admission. At the ER, x-rays taken were negative. Blood tests showed a WBC count of 18,200 with a shift to the left (normal is 6-8,000), hematocrit at 45% (normal is 40-50%), and serum amylase was normal (normal is 120 or less). His urinalysis showed 0-1 red cells per high power field (normal for post competition).

Later on in the morning (approximately 13 hours post trauma) he was examined by a general surgeon. At this point there was some visible and palpable swelling of the right lateral abdomen as well as marked tenderness over this area. His hematocrit at that point was 42%, but again with an elevated WBC count with a shift to the left. An IVP was obtained with normal results. A CAT scan demonstrated a large intra-abdominal mass. The visible and palpable mass was believed to be an intra-abdominal hematoma and not a rectus hematoma.

The athlete was taken to the operating room that afternoon for an exploratory laparotomy. At this time it was discovered he had a large hematoma involving the entire right colon spreading up into the duodenum and pancreas and down into the right pelvis. The athlete had sustained a partial rupture of the wall of the right colon, ruptured blood vessels of the wall of the right colon, and

3-4 inches of the muscularis had been partially avulsed with the mucosa remaining intact. There were no signs of fecal soilage. A formal right colectomy was performed with only one or two inches of terminal ileum being resected and an ileal right transverse colostomy was completed (see diagram). The liver, gallbladder, portal area, spleen, stomach, pancreas, duodenum and small bowel, and both kidneys were examined and appeared grossly normal. Total blood loss was approximately 5 units. The athlete was transfused 3 units of blood in the operating room.

This type of injury is, fortunately, extremely rare. Abrasions on the left side of the abdomen, and later verification from a video tape of the game, indicated trauma to the left side of the abdomen. But because of the contrecoup effect, the damage was done to the right side (ascending colon) of the abdomen. At no time did the athlete show any signs or symptoms of shock. Other clinical signs: generalized abdominal pain, dull ache, lack of abdominal rigidity or distension, generalized abdominal cramping and the presence of bowel sounds for up to 3 hours post injury did not indicate the severity of the injury. Even at the hospital 13 hours post-trauma, the only clinical signs were an elevated WBC count, generalized pain, slight distension and lack of bowel sounds.

At this time of discharge (12 days post-up) the athlete was eating, ambulating, afebrile, and doing well. He was informed to see his physician upon arrival home and that he could probably return to classes in 7-14 days. Six weeks post-op he was given permission by the team physician to begin skating. After 1½ weeks of light skating (i.e. no drills, contact, over-exertion) he was given the OK for full contact and drills and was allowed to return to competition. +

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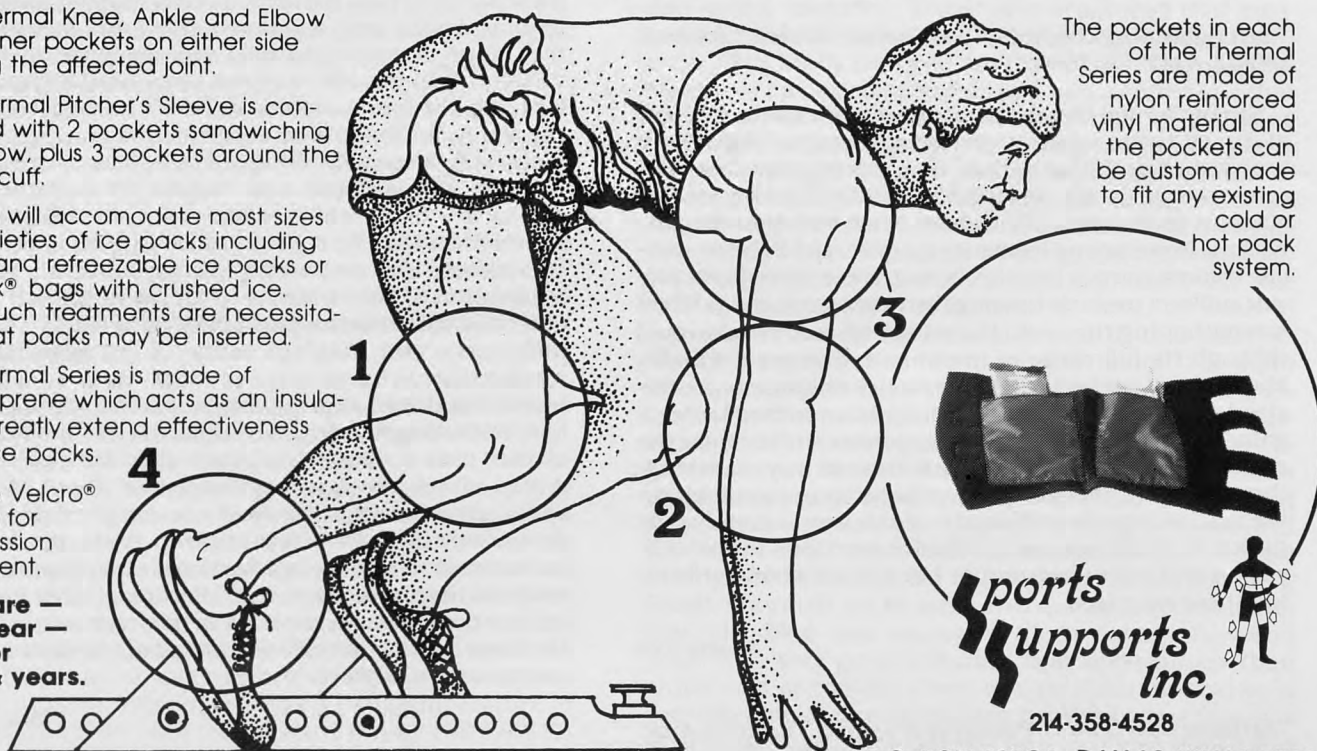
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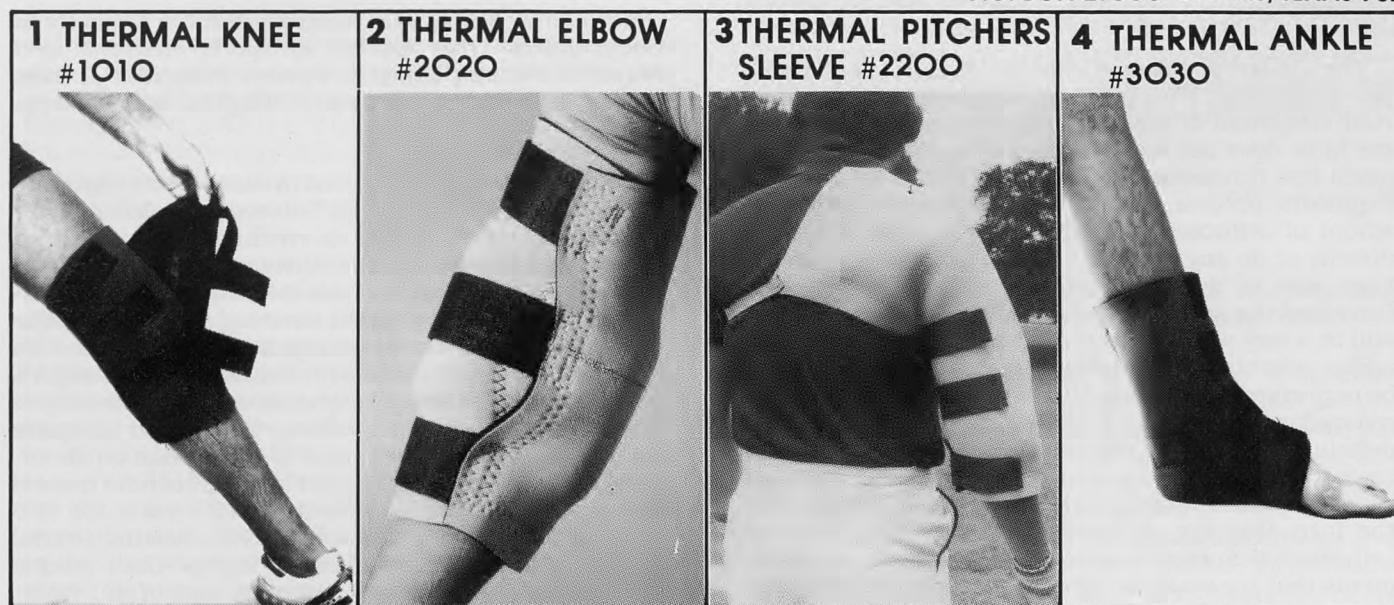
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Abstracts



John Wells, ATC, PT, PhD
Mars Hill College

"Strengthening the Neck," Joe Diange, *Athletic Journal*, :50-55, April 12, 1980.

Strengthening the neck is an extremely important aspect of strength training. In any contact sport, a great deal of force is absorbed by the neck. Thus, the neck muscles should be strengthened in order to protect the athlete from injury. Two rules are most frequently violated when strengthening the neck: 1) Never use an isometric exercise, and 2) Never exercise before a game or practice. Isometric exercises do not provide sufficient methods to strengthen any muscle group. When strengthening the neck, the muscle should be exercised through its full range of movement. The neck muscles should be stretched before a practice or game and exercised afterward. They should never be exercised before a game or practice. This can be dangerous and increase the athlete's risk of injury. There are various ways to strengthen the neck. Popular weight machines are available on the market. Another efficient and safe way to exercise the neck is through manual resistance exercises. Proper execution and safety techniques are a must when performing these exercises.

Marty Erb

"Arthroscopy, Gary G. Poehling, *Physical Therapy: Journal of the American Physical Therapy Association*, 60-12: 1615-1616, December, 1980.

The injured or diseased knee is a diagnosis and therapeutic dilemma. With incorrect diagnosis and inappropriate treatment or missed diagnosis and no treatment, the knee does not benefit and, worse still, may be rendered less functional. With the use of arthroscopy, the diagnostic accuracy is well over 90 percent. Before the advent of arthroscopy, the only way to view the knees directly or do any therapeutic manipulation within the knee was to do an arthrotomy. If arthroscopy only increased the accuracy and speed of diagnosis it would still be a very worthwhile procedure; however, it has the added advantage of allowing therapeutic procedures to be performed. These procedures include meniscectomy, removal of loose bodies, stabilization of osteochondritic defects, realignment of the patellar mechanism (in some cases), patellar shaving, and removal of some diseased synovial tissues. No part of the knee joint is hidden from the intruding eye of the arthroscope. The future of arthroscopic surgery lies in the development of instruments that are easier to use and are more efficient than those in current use. Those instruments of the future may include autoclavable, less delicate arthroscopes with a wider angle view, improved miniaturized motor-driven

cutters, laser beams, and cutting instruments using electrical currents, electrocautery, and ultrasound.

Andy Behl

"Effect of Flouri-MethaneTM Spray on Passive Hip Flexion," L. Robert Halkovich, MS, et. a., *Physical Therapy: The Journal of the American Physical Therapy Association* 61:185-188, February, 1981

Flouri-MethaneTM spray is a vapocoolant used in the management of restricted joint range of motion due to a shortening of the soft tissues surrounding that joint structure. The spray has been thought to alter passive range of motion by way of neuromusculoskeletal pathways and has been used in the clinic for a number of years. However, no objective evidence has been documented concerning the spray's effectiveness. Using experimental design and a quantitative joint measurement technique, a controlled trial was designed to test the validity of clinical observations associated with vapocoolant application. Subjects were 30 normal volunteers randomly divided into an experimental group and a control group. A specially designed table was constructed to position and stabilize each subject for monitoring the right lower extremity's resistance to side-lying straight leg raising. Specific right hip flexion goniometric measurements were compared and analyzed before and after application of Flouri-MethaneTM spray to the soft tissues overlying the posterior part of the right thigh. The mean differences and maximal range of pelvifemoral angle measurements between the pre-test and post-test experimental and control groups were statistically significant ($p < .02$) as determined by an unpaired t test. Interpretation of this data analysis indicated that the experimental group, which received application of Flouri-MethaneTM spray, significantly increased the range of passive hip flexion over that of the control group. Factors that caused an increase in passive hip flexion of experimental-group subjects may have been neurophysiological or mechanical, or a combination of both. Further research on Flouri-MethaneTM spray needs to be carried out to determine its mechanism of action.

Mae Yahara

"Body Composition and Maximal Aerobic Capacity of Bodybuilders" *The Journal of Sports Medicine and Physical Fitness*, Diane L. Spitzer, Francisco J. Diaz, Steven M. Horwath, and James E. Wrights, June 1980, pp. 181-191.

Ten adult men actively involved in the sport of bodybuilding participated in the study. Subjects included a former several-time Mr. Universe, a recent Mr. World, and a recent Mr. America, with the others ranging from state to national caliber. Maximal aerobic capacity was determined only on eight subjects utilizing a modified Balke treadmill test. In these tests subjects started exercise on a level surface at 93m/min with the slope increasing 1% each minute. The test was terminated when the subject was unable to continue walking for another complete minute or until objective signs of exhaustion on abnormal ECG tracings, were noted. The subjects have trained at weight lifting for an average of 12.1 years for 12.6 hours per week. Body fat averaged 9.9%. Resting arterial blood pressures were somewhat higher than resting values recorded for normal sedentary men of equivalent ages. Mean maximal oxygen uptake averaged 4.04-0.80 liters/min, 42.7-7.55 ml/kg; min⁻¹, and 47.6-8.98 ml/kg; BM.min⁻¹ respectively. Maximal ventilatory volume was

134-39 liters/min, and the mean maximal heart rate was 182-13 beats/min. Eighty-five percent of the caloric content of the daily diet reported by our subjects was supplied by proteins, 10% from fat, and 5% or less by complex carbohydrates. Because of the higher content of cholesterol in this type of diet, this group of subjects have been ingesting two to three times the average American cholesterol consumption per day. Also, the large intake of vitamins, minerals, and other pharmacological agents such as anabolic steroids by these subjects could be a factor in the higher resting blood pressure values, which are borderline hypertensive. The purpose of the body-builders training is to develop specific muscle groups so as to modify specific body proportions. We were interested in determining whether or not these individuals differed radically from the normal population or other competitive athletes in certain basic physiological measurements. It is apparent that they generally fit into the average nonathletic population aerobically in spite of their training regimen, which is designed specifically for high muscular development. They do not require more than the normal amount of aerobic power to maintain their specific training regimes.

Tom Rolan

"Comparison of In Vivo Temperatures Produced by Hydrotherapy, Paraffin Wax Treatment, and Fluidotherapy," Roy M. Borrell, et. al., *Physical Therapy: Journal of the American Physical Therapy Association*, 60:1273-1276, October 1980.

In the application of superficial heat, the amount of heat absorbed by the body is proportional to the difference between the body temperature and the skin temperature and to the total surface area over which the heat is applied. The origin and nature of the heat transfer agent (whether air, liquid, or solid) is important in terms of its ability to raise the skin temperature; the temperature of the agent itself is unimportant. Stillwell stated that there is no basis for the widely held belief that wet heat is more effective than dry heat. Paraffin is an insulator, and once a layer builds up on an immersed limb, heat penetration is substantially reduced. Even at a bath temperature of 126 F (52.2 C), the skin temperature is only 102 F (38.89 C). Ultrasound and diathermy are used as heat therapy modalities, and their effectiveness in producing the physiological reactions characteristic of a heat modality is also directly related to the temperature rises they produce. In the case of ultrasound, temperature rises are typically 1.8 to 3.6 F (1 C-2 C). At a depth of 0 to 2.38 cm, microwave diathermy at 2.456 Mc produces rises of 3.6 F (2 C). Penetrating power of surface heat modalities originated with the recent development of a new heat modality, Fluidotherapy. This dry heat modality uses a finely divided solid suspended in an air stream, the mixture having the properties of a liquid. Heat is a strong therapeutic agent: it increases blood flow, sedates, decreases blood pressure, increases pulse rates, and promotes healing by accelerating biochemical reactions. Fluidotherapy treatment of the hand at 115 (46.2 C) results in a sixfold increase in blood flow and a fourfold increase in metabolic rates (as measured by oxygen uptake). Chemicals that are mild skin irritants may make a patient feel warm but they will not produce any in vivo temperature rises or any of the physiological effects of heat. Paraffin treatment by the nine-dip method at 131 F (55 C) delivers less heat than a 20-minute whirlpool treatment at 102 F (38.89 C). A dry whirlpool (Fluidotherapy) delivers considerably more heat than does paraffin or hydrotherapy because higher temperatures can be tolerated in a dry environ-

ment. The data show that surface heating modalities are much more effective in producing elevated temperatures than is ultrasound therapy or diathermy at depths of up to 1.2cm.

Andy Behl

"Comparison of Blood Flow in the Ankle of Uninjured Subjects During Therapeutic Applications of Heat, Cold, and Exercise," Kenneth L. Knight, et. al., *Medicine and Science in Sports and Exercise* 12:76-80, 1980.

One of the basic assumptions of rehabilitation of musculoskeletal injuries is that blood flow to the injury area must be increased. Traditionally, application of various forms of heat have been used to increase blood flow. Since the introduction of cryokinetics numerous authors have attempted to explain its clinical success in physical and sports medicine. Many have concluded that cold-induced vasodilation resulted from cryokinetic treatment. This study required multiple blood flow measurements over a period of 55 minutes and a technique that could be used during and/or immediately after jogging on a treadmill. Strain gauge plethysmography was selected, the plethysmography for the study was designed from the model of Hallbrook, et. al. Twelve male college students volunteered to act as subjects and were tested at the same time of day on six occasions. All subjects completed each of the experimental conditions in randomized order. The six treatments were: 1) control, 2) heat, 3) cold, 4) control-exercise, 5) heat-exercise, and 6) cold-exercise. Exercise consisted of five 3-minute bouts (3.5 mph) interspersed with heat, cold, or control throughout a 45-minute period. non-exercise, heat and cold were administered for 24 minutes each, followed by 20 minutes without treatment. Blood flow was measured at specific times throughout each experimental condition. Total blood flow was determined by integration using a trapezoidal procedure. In all cases, total flow was divided by the time during which it occurred and reported as average flow. Blood flow could not be measured during exercise, therefore, bloodflow was estimated. Both average flow and peak flow were greater during heat applications than either cold or control. There was no difference between control exercise or control exercise. Peak blood flow was greater during each of the exercise conditions than it was during the heat condition. The theory that cryokinetics causes vasodilation was not tenable in light of the data. The data supports the theory that the success of cryokinetics is due to exercise and that ice applications act only to allow relatively pain-free exercise in an injured joint or muscle.

Deloss Brubaker

"Flexibility vs. Calisthenics," Victor Ferre, *The Journal of Physical Education*: 64, January/February, 1981.

This study was designed to determine if flexibility exercises are better than calisthenic exercises for pre-practice or pre-meet warm-up activities. It was also intended to determine whether speed will increase and injuries will decrease. Two randomly selected groups which consisted of twenty-six college male athletes (freshman and sophomores) were chosen. During a four week period, one group utilized the calisthenic method of pre-practice warm-ups and the other group utilized the flexibility method. The same pre-test and post-test, involving a tabulated average of three forty yard dashes, was given to both groups. Six major calisthenic exercises

and six flexibility exercises were used to cover the muscle areas that tend to be more susceptible to injuries and also necessary to develop for increased speed. The mean for the calisthenic groups pre-test times was 5.1 and for the post-tests was .324 and .485 respectively. A mean of 4.9 was derived for both the pre-test and post-test times of the flexibility group. The pre-test and post-test standard deviation was .235. The study showed that neither flexibility exercises nor calisthenic exercise resulted in increased speed or a decrease of injuries in warm-up exercises.

Beth Sloan

"Flexibility for Dancers and Athletes," Richard Lopez, *The Journal of Physical Education, Recreation, and Dance*: 29-31, May, 1981.

When involved in the areas of sports medicine and rehabilitative medicine it is of interest to pay attention to the stretching exercises that many dancers use, particularly those who have been dancing for several years. Experienced dancers will intuitively avoid ballistic stretching and use static and reciprocal stretching techniques. The advantage of using these techniques can be seen when the stretch reflex is considered. Stretch reflexes can be classified as phasic or static. A phasic stretch reflex is hypothesized to involve that fast conducting neurons of the spindle. A static stretch reflex is thought to involve the contraction of a few motor units at a time in succession thus sustaining a muscular contraction. The application of this knowledge of the stretch reflex to flexibility training suggests several reasons why ballistic stretching exercises are not advisable. The suddenness of the stretch may initiate a stretch reflex per-

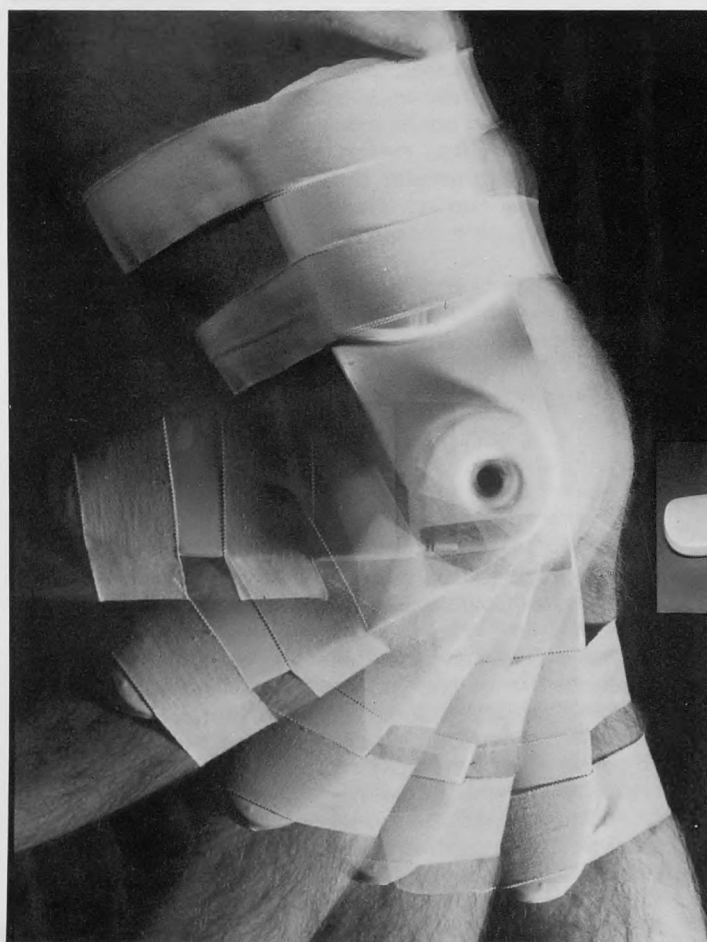
mitting only momentary lengthening of the muscle fibers. Researchers also suggest that muscle soreness and gradual loss of a pre-existing natural resilience and elasticity can result from ballistic stretching. Conversely, static stretching exercises are recommended because these do not involve a stretch reflex, or at least a strong one. Reciprocal stretching exercises are also considered to be superior to ballistic stretching. These exercises exploit the physiological mechanism of reciprocal inhibition, during this time the muscles can be stretched to their limit without evoking a stretch reflex. The following guidelines for flexibility training apply when using either reciprocal or static stretch exercises: 1) Stretch the muscles after they are warmed up by exercise. 2) Stretch the muscles so that the pull is felt in the bulk of the muscle. 3) Ease into the stretched position and never go beyond the point of mild discomfort. 4) Whenever possible stretch in a sitting or reclining position. 5) Be aware that the weight bearing muscles are the ones most often requiring flexibility training. Flexibility is one of the most important aspects of training for dancers and the athlete, and it can be best accomplished by employing static or reciprocal stretching exercises.

Tim Garl +

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Professional Burnout: Implication for the Athletic Trainer

Greg Vergamini, PT, ATC

The term "burnout" is often heard in the vernacular, and it is not uncommon to hear a person refer to themselves as "burned-out" after a stressful or draining chain of events. We also refer to a professional who has given up their particular career, or who only goes through the motions with a minimum of effort, in the same set of terms. This is all too common in many helping professions, and the field of Athletic Training does not seem to be immune. What is not commonly realized by the majority of persons is that this phenomenon of burnout is also a clinically recognized syndrome, a collection of signs and symptoms, affecting many persons involved in "people professions."

Burnout is defined as "to fail, wear out, or become exhausted by making excessive demands on energy, strength, or resources."¹ Another defines it as "physical and/or emotional exhaustion caused by excessive demands" or simply "inefficient coping mechanisms."²

Who are the "victims" of this syndrome? Invariably they are persons involved in the helping professions, "the dedicated and the committed",¹ usually working long hours with relatively low material compensation, and under consistent pressure to give of themselves. This pressure originates from three separate sources: 1) themselves (they go into these professions in order to help people), 2) clients/patients (who are in need of their services in order to achieve their own goals), and 3) administrators (who may have a completely different set of expectations).¹ In addition, these helpers are not only consistently giving, but are also involved in situations and relationships involving crisis, emergencies, or "sticky situations".²

The etiological factors leading to the burnout syn-

drome are multitudinal, and much variety exists between individual cases. Of the many causes noted,^{1,2,4,5,6} the ones most applicable to athletic trainers include a negative focus, patient overload, the chronic nature of many injuries and conditions, personality conflict, unwanted roles and expectations, and reality shock.

Despite the preventative aspects of athletic training, this profession consistently deals with troubled human beings who have injured parts. The healthy body portions are often ignored, and the thrust of attention in the injured athlete is usually aimed at what cannot be done, as opposed to those functions which he/she still may be able to accomplish. Thus, our focus is of a negative nature, which tends to drain both the helper and the patient.

Very often health care professionals find themselves attempting to give care to such a high number of people that the quality of care suffers, and none of those actually receive the level of care for which the giver is qualified. This adds a frustration factor to the process. As Maslach has stated, "Burnout often becomes inevitable when the professional is forced to provide care for too many people."⁴

Many health care personnel often put effort into their work, but never see positive results, either by the nature of the client, the problem, or unduly high expectations. Many problems recur chronically, and "... their successes go away, but their failures keep coming back to haunt them and provide constant visible proof that they are incompetent or make mistakes."⁶ Acute injuries allow demonstration of expertise, usually with immediate and gratifying results, but chronic conditions sometimes appear akin to black holes, absorbing any and all energy without apparent change.

Personality conflicts with athletes or co-workers may very easily trigger burnout. It's not uncommon to find oneself in a working relationship with a patient or fellow staff member with whom one would rather not spend time. However, this will not warrant leaving the job undone, and this results in an excess energy cost in order to complete the task.

Roles and expectations may box the athletic trainer into unwanted behavior. Helping persons are expected to consistently act in a kind, understanding, perceptively listening, and understanding manner, no matter what



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the situation or background. In addition, administrators, coaches, and athletes often make what seem to be unreasonable demands on when, where, and how time is spent.

Reality shock, the "I never knew it was going to be like this" feeling that usually becomes apparent early in one's career may entail the loss of certain ideals. When this occurs, a mourning process accompanies this loss, and a real grieving process will take place.

Finally, health care deliverers often find themselves in a situation which they cannot possibly win, they enter the field in order to help other people (i.e., this is one form of their positive reinforcement), but perhaps, instead of receiving positive strokes, more and more demands are placed on them, and they hear "That's what you're paid to do."

All of these factors can be easily magnified by the self evaluation that "I must be the only one who ever felt like this (because nobody else ever told me they did). There must be something wrong with me."

Since burnout is a syndrome, there are certain signs and symptoms to be aware of when considering the prevention and/or alleviation of it. The principle symptom is a feeling of unease in the professional — a sense that there is something wrong, though exactly what it is may not be clear. Fatigue, mental or emotional, may accompany this, often with no apparent cause.

Behavioral changes often accompany burning out. These may include a difference in attitude, with a usually outgoing person becoming quiet or withdrawn,² cynicism,^{1,4} depression,² paranoia,¹ and inflexibility of thinking.¹ Stress related signs and symptoms, such as insomnia, ulcers, hypertension, and/or a multitude of others may occur. Exhaustion without apparent physical cause is common, as are various escape mechanisms, such as increased absenteeism or tardiness, or substance abuses, such as alcoholism.^{2,4} Marital conflict and mental illness may follow.⁴

Most individuals will not reach these extremes, but rather, apply various other coping mechanisms, effective or not. One such behavior is to become "super employee",² trying to take on the hardest jobs, performing more work than anyone else, and proving to themselves (and to others) that they can still perform. Unfortunately, the quantity does not make up for the loss of quality.

Escape is a very common coping procedure used in burnout. This may be accomplished by changing jobs, moving up to an administrative post, or even by leaving the profession, altogether.⁶

It is not uncommon to see professionals distance themselves from patients, not realizing that this is not helping the situation. This can be very damaging, both to the helper and the helpee. A common feeling accompanying this behavior is verbalized as "I don't want to care anymore!"² From this point, the behavior and attitude are defended by convincing oneself that the patients deserve their problems,⁴ and/or, that there's something basically wrong with them.⁶

Such coping mechanisms are not optimal, either for the concerned professional or for the patient/client. There are other, more rewarding ways to deal with the

burnout phenomenon. As in any other health area, prevention is the key.

Self awareness, and perception of personal limitations, in a realistic manner, is probably the best prophylactic course to take. While some persons are able to tolerate longer work days and a higher level of stress, it is important for any helping professional to learn his/her limitations. Rather than rating oneself by the standards others may measure by, it will be much more satisfying to rate by purely personal scales. Striving to be the very best is an impossible task, because each person has unique talents; but becoming good at one's career is not only a realistic goal, but one that is attainable, and which can always be improved upon.

It's important to distinguish mature commitment from needs to 1) be liked, 2) feel worthwhile, and 3) feel a part of something.¹ These latter three needs can be better met in more appropriate ways than driving oneself to burning out. Within reason, it is imperative to learn the preservation of self, before taking on the task of care of others. "Physician, heal thyself."

Another effective prophylactic is communication of our needs, with reinforcement of positive feedback received from others. There is no intrinsic reason for either persons or systems to change, so long as they're not aware of need for and consequences of it.

Patients and clients need to take increased responsibility for their own care. Rather than being a passive process, healing is an action, a relationship, which takes energy and work from all parties involved. As one athletic trainer described the field, it is "teaching the athlete to take care of him/herself"

"Time outs" can be very helpful. These are not simply coffee breaks, but rather, time for less stressful work, while other staff absorb responsibilities. The importance of this is that patient care does not suffer or wait while the time is being taken. Were this to happen, guilt could easily follow, and defeat the purpose of taking the time.⁴ For most effective decompression, these time periods can range from an hour a day to certain days of the week.

A professional support group is probably one of the most easily adopted techniques in the prevention and care of burnout.^{2,4} These are fellow professionals who can not only give necessary reinforcement, when appropriate, but also supply constructive criticism, when the situation calls for it. In the athletic training profession and other groups of health care providers, workshops and conventions often serve to bring individuals together for this purpose. However, a more informal and localized group, which can function socially as well as professionally, is the most helpful, since it can meet more often. The only criteria for such a group, other than support/criticism, is that the members be in similar professions, and that they be non-competitive.²

In conclusion, it is most important to be aware that burnout is a common occurrence, and that those who feel thus emptied are not alone. On the other hand, neither is it a permanent condition. To quote Maslach: "... many of the causes of burnout are located not in permanent traits of the people involved, but in certain specific social and situational factors that can be influenced..."⁴ +

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Aspirin is the world's most commonly used drug. In the United States alone, people ingest an estimated 50 million pounds of aspirin yearly,¹ an astonishing rate of about 100 million tablets daily. Moreover, aspirin is an ingredient in at least 400 drug preparations¹⁶ sold under various trade names. No wonder roughly 100,000 cases of serious and sometimes fatal aspirin poisoning occur each year.¹

Certain symptoms should alert the user to the possibility of aspirin poisoning. Ringing in the ears is the most common first sign; others are dizziness, headache, confusion, weakness, nausea, and an increase in the depth and rate of respiration. These manifestations indicate that the dosage should be decreased or stopped completely.¹ Where is the dividing line between safe and unsafe usage of aspirin? A statistically safe dose is six tablets or less in 24 hours, with no more than two tablets in any 4 hour period. This dosage should be taken for no more than three consecutive days. Even this "safe" amount, however, may cause gastrointestinal ulceration with consequent bleeding in at least half of those taking such quantity. Although the blood loss usually does not exceed a teaspoon a day, it could, if continued, result in iron-deficiency anemia and, in someone who already has a tendency to bleed easily, could be dangerous.

Aspirin can also affect bleeding in another way. As few as one to four tablets may delay the body's ability to clot blood.¹⁶ Under normal conditions, this delay in blood clotting has little significance. But if the athlete then incurs an injury, the delayed clotting could lead to extensive hemorrhage into the damaged tissues.

When aspirin is taken on a continuing basis to relieve chronic discomfort, the chance of adverse reactions increases. So another warning deserves emphasis: *Therapeutic doses of aspirin (i.e., 10 or more tablets daily for a week or more) should be taken only under the direction of a physician.*



Dr. Fred is Director of Medical Education at St. Joseph Hospital, Houston; Adjunct Professor, Department of Health and Physical Education, Rice University, Houston; and Professor, Department of Internal Medicine, The University of Texas Medical School at Houston. He is a Fellow of the American College of Sports Medicine and a member of the editorial board of *Medicine and Science in Sports and Exercise*.

Certain effects of aspirin, some good and some bad, have specific implications for the athlete. The good effects stem from the drug's well known ability to reduce fever, relieve pain, and counteract inflammation. The bad effects relate to aspirin's poorly appreciated capacity to impair fluid balance by augmenting sweat losses, increasing urinary output, and inhibiting thirst.

Sweating is a characteristic response to aspirin intake when fever is present;¹⁷ raised body temperature is a typical consequence of physical exertion;¹⁰ and aspirin in large doses can even produce fever by increasing oxygen consumption and metabolism.¹⁵ Thus, in hot weather, aspirin therapy may augment sweat losses, causing earlier and greater dehydration and higher body temperature than otherwise might be expected.

Increased urinary output is another potential outcome of aspirin therapy. Through its action on the kidneys, aspirin promotes excretion of sodium, potassium, glucose, and water.^{11,18}

How aspirin inhibits thirst awaits clarification. Current scientific knowledge suggests two mechanisms, one involving the brain^{2,8,14} and the other, the kidneys.^{3,12,13}

Considering these adverse effects, the author believes that aspirin can predispose athletes to heat illness. Two recently reported cases support this view.^{4,5} The amount of aspirin and the intensity and duration of exercise necessary for this reaction are not yet known. Until such information becomes available, athletes should use aspirin cautiously during competition in the heat.

One final precautionary note. Aspirin precipitates attacks of asthma, occasionally life-threatening, in a considerable proportion of known asthmatics and in a small percentage of the general population.^{7,16} Furthermore, athletes should be aware that the first symptoms of asthma may be wheezing and tightness in the chest that come on during or, more typically, shortly after physical exertion. Thus, athletes who have such symptoms (referred to as exercise-induced asthma) should scrupulously avoid aspirin and all proprietary mixtures containing it.⁹

If the athlete finds himself unable to tolerate aspirin, what are his alternatives? The choice depends upon the type of unfavorable reaction to aspirin and the ailment prompting use of the drug. When, for instance, the reaction is gastrointestinal bleeding, a buffered form of aspirin may eliminate it. For localized pain, applying heat, cold, or some other form of physical therapy may do the trick. But for generalized pain and for fever, acetaminophen (Tylenol, Datril, etc.) may be the answer. This nonprescription drug gives relief comparable to that of aspirin and is relatively safe in dosages of one or two tablets three or four times a day. Like aspirin, however, it should be taken for no more than several days at a time. Other medications such as Motrin and Indocin are effective as anti-inflammatory agents but they require prescription and have their own side effects.

Summary

Aspirin is a remarkably effective and inexpensive drug for reducing fever, relieving pain, and counteracting inflammation. Considering the frequency and amount of its use, aspirin is also remarkably safe. Nevertheless, its ability to produce serious adverse effects is substantial. If used sparingly and wisely, aspirin can be the athlete's friend. But if used without due respect for its harmful potential, aspirin can be the athlete's foe. +

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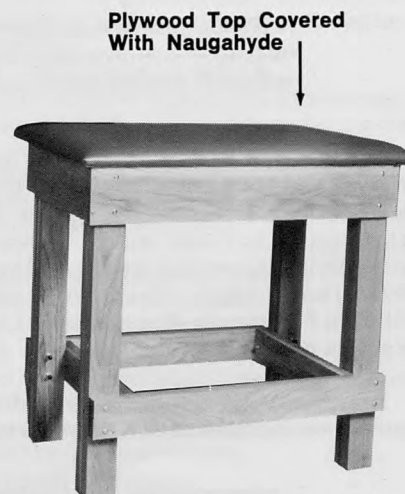
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"The educational grants and scholarships awards represent much more than a listing of names. It represents the continuing faith and trust that the Board of Directors and friends of the National Athletic Training Association have placed in our care. The honor roll has grown this year, both in numbers of individuals who have generously made contributions to these awards and in the amount of dollars those individuals have given. The Committee commends them for their support and hopes only to provide more opportunity through which others can express their interest in NATA.

The Awards honor the past, recognize the present, provide stimulus and inspiration for the future and sponsor education for deserving young people."

NATA Committee on Grants and Scholarships

*Reprinted with permission from
William E. Newell, Chairperson

* * *

I would like to give my thanks to Mr. William "Pinky" Newell and Ms. Mary Edgerley for their valuable time and assistance in helping to gather all this information. Unfortunately, I was unable to reach every past award recipient. However, I would still very much like to hear from those people. Please write me at: Chris Neuman, Ahearn Fieldhouse, Kansas State University, Manhattan, Kansas 66506.

In recognition of those outstanding achievements and service to our Association, we present to you the following:

PRESIDENT'S CHALLENGE AWARD

(sponsored by Bectin-Dickinson Protective Products)

1974 - Kansas, City, MO — **Donald L. Cooper, MD**

Dr. Cooper is currently Director of the Student Health Center at Oklahoma State University. He is also the team physician for Oklahoma State.

Dr. Cooper donated his gratuity to the Oklahoma State University Development Foundation for scholarship aid for student trainers and research in Sports Medicine.

1975 - Anaheim, CA — **Thomas Schaffer, MD**

Dr. Schaeffer is currently the Acting Director, Adolescents' Health Services, at the Children's Hospital in Columbus, Ohio. He is also Chairman of the American Academy of Pediatrics Committee on Physical Fitness, Recreation and Sports.

Dr. Schaeffer donated his gift to the Women's Athletic Program at The Ohio State University. The award funds at Ohio State have since been used for educational materials for student trainers not provided for in their budget.

1976 - Boston, MA — **Dan Hanley, MD**

At the time of award presentation Dr. Hanley was residing in Brunswick, Maine.

PRESIDENT'S CHALLENGE AWARD

(sponsored by Kwik Kare Products)

1977 - Dearborn, MI — **Joseph Godfrey, MD**

At the time of award presentation Dr. Godfrey was residing in Buffalo, N.Y.

1978 - Las Vegas, NV — **Don H. O'Donoghue, MD**

At the time of award presentation Dr. O'Donoghue was residing in Oklahoma City, Oklahoma.

1979 - St. Louis, MO — **Jack C. Hughston, MD**

At the time of award presentation Dr. Hughston was residing in Columbus, Georgia.

1980 - Philadelphia, PA — **Frank McCue, MD**

Dr. McCue is currently a Professor of Orthopedic Surgery at the University of Virginia. He is also the team physician for the University of Virginia.

Dr. McCue's award was used to support graduate research in Sports Medicine.

1981 - Ft. Worth, TX — **Edward T. Smith, MD**

Dr. Smith is the team physician for Rice University and recently received the President's Challenge Award in Ft. Worth this June.

N.A.T.A.

ROBERT H. GUNN SCHOLARSHIP AWARD

(sponsored by NATA)

1975 - Anaheim, CA — **John Faulstick**

Mr. Faulstick is currently the Head Athletic Trainer at Kent State University.

Mr. Faulstick utilized his award to assist in the completion of his undergraduate degree at Ball State University.

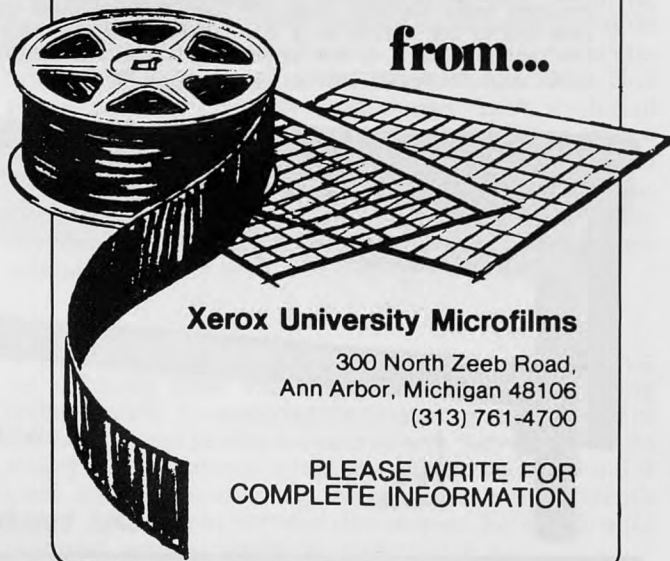
1976 - Boston, MA — **William Michael Sherman**

Mr. Sherman is currently in the Doctoral program in Pharmacology at the University of South Carolina.

Mr. Sherman utilized his award to help support his undergraduate work at Ohio University.

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1977 - Dearborn, MI — **Larry Lynn Scheiderer**

Mr. Scheiderer is currently an Assistant Athletic Trainer at Ohio University.

Mr. Scheiderer used his award to help cover expenses during graduate school.

1978 - Las Vegas, NV — **Rex Lee Sharp**

At the time of the award presentation, Mr. Sharp was a student at Ball State University.

1979 - St. Louis, MO — **Robert Allen Smodie**

At the time of award presentation, Mr. Smodie was a student at West Chester State College.

1980 - Philadelphia, PA — **Joel F. Hanneman**

Mr. Hanneman is currently beginning his graduate work at Lamar University.

Mr. Hanneman used his award to help cover expenses during his undergraduate work at Lamar University.

1981 - Ft. Worth, TX — **Gregory Charles Behrens**

Mr. Behrens is a student at Ohio University and received his award this June in Ft. Worth.

DEL C. HUMPHREY POST GRADUATE SCHOLARSHIP AWARD

(sponsored by Schutt Manufacturing Co.)

1977 - Dearborn, MI — **Jeffrey Joseph Ciolek**

Mr. Ciolek is currently Staff Physical Therapist/Athletic Trainer at the Southwest Ohio Sports Medicine Center in Hamilton, Ohio.

Mr. Ciolek used his award to pursue his Physical Therapy education at the University of Pennsylvania.

1978 - Las Vegas, NV — **Joseph Erwin Theisen**

Mr. Theisen is currently a Staff Physical Therapist at Bellin Memorial Hospital in Green Bay, Wisconsin.

Mr. Theisen used his award to help cover expenses during his post-graduate education.

1979 - St. Louis, MO — **Jean Marie Schulte**

At the time of award presentation, Ms. Schulte was a student at West Virginia University.

1980 - Philadelphia, PA — **Meryl Sue Peyser**

At the time of award presentation, Ms. Peyser was a student at the University of California, Los Angeles.

1981 - Ft. Worth, TX — **Brian Peter Quinn**

Mr. Quinn is currently a student at the University of Southern California and received his award this June in Ft. Worth.

G.E. "MOOSE" DETTY POST GRADUATE SCHOLARSHIP AWARD

(sponsored by PRO Orthopaedic Devices, Inc.)

1978 - Las Vegas, NV. — **Donald Keith Luxton**

At the time of the award presentation, Mr. Luxton was a student at East Carolina University.

1979 - St. Louis, MO — **R. Richard Ray**

Mr. Ray is currently an Assistant Athletic Trainer at Kansas State University.

Mr. Ray used his award to help cover expenses during his graduate work at Western Michigan University.

1980 - Philadelphia, PA — **John Bright Cage**

Mr. Cage is a Sportsmedicine Consultant to the Texas City Independent School District. He is also enrolled in the Physician's Assistant Program at the University of Texas Medical Branch in Galveston.

Mr. Cage used his award to help cover expenses for educational supplies.

1981 - Ft. Worth, TX — **Joseph Earl Robinson**

Mr. Robinson is currently a student at Canisius College and received his award this June in Ft. Worth.

NATA POST GRADUATE SCHOLARSHIP AWARD

(sponsored by National Football League Charities)

1978 - Las Vegas, NV — **Roger Dean Harbour**

Mr. Harbour is currently a Certified Health Specialist/Athletic Trainer at Arlington High School in Arlington Heights, Illinois.

Mr. Harbour used his award to pursue his Master's Degree at the University of Illinois.

1979 - St. Louis, MO — **Rex Lee Sharp**

At the time of the award presentation, Mr. Sharp was a student at Ball State University.

1980 - Philadelphia, PA — **Joseph Charles Novak**

Mr. Novak is currently beginning his graduate work at Michigan State University.

Mr. Novak used his award to help cover expenses for a summer curriculum program at West Chester State College.

1981 - Ft. Worth, TX — **Bradley John Beard**

Mr. Beard is currently a student at West Chester State College and received his award this June in Ft. Worth.

NATA POST GRADUATE SCHOLARSHIP

(sponsored by National Basketball Association)

1980 - Philadelphia, PA — **James Gerard Nespor**

Mr. Nespor is a graduate student at the University of Arizona and Athletic Trainer for Tucson High School.

Mr. Nespor used his award to help cover expenses during his graduate work at the University of Arizona.

1981 - Ft. Worth, TX — **Marjorie Ann King**

Ms. King is currently a student at the University of New Hampshire and received her award this June in Ft. Worth.

LIVING MEMORIAL UNDERGRADUATE SCHOLARSHIP

(sponsored by NATA District 4)

1976 - Boston, MA — **William Michael Sherman**

Mr. Sherman has been accepted into the Doctoral program in Pharmacology at the University of South Carolina where he begins this fall.

Mr. Sherman used his award to support his education.

1977 - Dearborn, MI — **John Rousselle**

Mr. Rousselle is currently an Assistant Athletic Trainer/Part-time Assistant Professor in the Athletic Training Curriculum at Canisius College.

Mr. Rousselle utilized his award for tuition at Valparaiso University.

1978 - Las Vegas, NV — **R. Richard Ray**

Mr. Ray is presently an Assistant Athletic Trainer at Kansas State University.

Mr. Ray utilized his award to help cover expenses during his senior year at the University of Michigan.

1979 - St. Louis, MO — **Alice J. McNeill**

Ms. McNeill has recently finished her graduate work at West Virginia University and is searching for full-time employment.

Ms. McNeill used her award to help cover expenses during her senior year at Ohio University.

1980 - Philadelphia, PA — **Glenn Rodney Brickey**

Mr. Brickey is currently a senior at Indiana State University.

Mr. Brickey used his award to help cover expenses during his undergraduate work at Indiana State University.

1981 - Ft. Worth, TX — **Tim G. Sanidas**

Mr. Sanidas is currently a student at Indiana State University and received his award in Ft. Worth this June.

POST GRADUATE SCHOLARSHIP AWARD

(sponsored by NATA District 4)

1980 - Philadelphia, PA — **Sherrie Lynn Springer**

Ms. Springer recently completed her graduate work at the University of Arizona where she also worked as a high school trainer. Ms. Springer is looking for full-time employment.

Ms. Springer used her award to help cover expenses during her graduate work at the University of Arizona.

1981 - Ft. Worth, TX — **Lori Kay Waltman**

Ms. Waltman is currently a student at Mankato State University and received her award in Ft. Worth this June.

WILLIAM E. NEWELL SCHOLARSHIP AWARD

(sponsored by Cramer Products, Inc.)

1971 - Baltimore, MD — **Larry Nottingham**

Mr. Nottingham is currently a Health Teacher/Athletic Trainer at Robinson Secondary School in Fairfax, VA.

The award was used to help pay expenses for graduate school at Western Illinois University.

1972 - St. Louis, MO — **James T. Murphy**

Mr. Murphy is presently the Head Athletic Trainer at McNeese State University.

Mr. Murphy used his award to help further his education.

1973 - Atlanta, GA — **Jerry A. Marsh**

Mr. Marsh is currently the Head Athletic Trainer at Davenport West High School in Davenport, Iowa. He is also the Vice-

President for the Health Division of the Iowa Association for Health, Physical Education, Recreation and Dance.

Mr. Marsh used part of his award for transportation to the NATA National Convention and part of the award for his work on his Masters Degree at Western Illinois University.

1974 - Kansas City, MO — **Douglas K. Brand**

At the time of award presentation, Mr. Brand was a student at the University of Washington.

1975 - Anaheim, CA — **Kirby E. Patterson**

At the time of award presentation, Mr. Patterson was a student at East Carolina University.

1976 - Boston, MA — **Karen Mary Frame-Van Horn**

Ms. Frame-Van Horn is presently a licensed Physical Therapist in the state of Pennsylvania working at the Warminster General Hospital.

The award was used to help cover expenses toward an advance degree in Physical Therapy.

1977 - Dearborn, MI — **Hilary Ann Ennis**

Ms. Ennis was a student at Muehlenburg College at the time of the award presentation.

1978 - Las Vegas, NV — **Robert E. Osborne**

Mr. Osborne was a student at the University of Pittsburgh at the time of award presentation.

(sponsored by Chattanooga Pharmacal Co.)

1979 - St. Louis, MO. — **Florence Rowens Cottrell**

Ms. Cottrell will begin a graduate assistantship at Kansas State University this fall with an emphasis in exercise physiology.

Ms. Cottrell used the award to help cover expenses during her undergraduate work at East Carolina University.

1980 - Philadelphia, PA — **Richard Carl Young**

Mr. Young is currently an Athletic Trainer with the Greensboro Hornets, a Class A Farm Club in Greensboro, North Carolina.

Mr. Young used the award to help cover expenses during his undergraduate work at the University of Maine.

1981 - Ft. Worth, TX — **James B. Zumbo**

Mr. Zumbo is a student at Ithaca College and received his award this June in Ft. Worth.

NATA UNDERGRADUATE SCHOLARSHIP AWARD (sponsored by NATA)

1973 - Atlanta, GA — **Keith Papas**

At the time of award presentation Mr. Papas was a student at Gettysburg College.

1974 - Kansas City, MO — **Donald Lee Kaverman**

Mr. Kaverman is currently the Coordinator of Sports Medicine at Ferris State College.

Mr. Kaverman utilized his award to further his education in preparation for a career in Sports Medicine.

1975 - Anaheim, CA — **Jeffrey J. Ciolek**

Mr. Ciolek is currently Physical Therapist/Athletic Trainer for the Southwest Ohio Sports Medicine Center in Hamilton, Ohio.

Mr. Ciolek utilized his award in continuing education at Miami University of Ohio.

1976 - Boston, MA — **Robert Neil Evers**

Mr. Evers was a student at Northern Arizona University at the time of award presentation.

1977 - Dearborn, MI — **Deborah L. Dean**

Ms. Dean was a student at Mankato University at the time of award presentation.

1978 - Las Vegas, NV — **Amy E. Oursler**

After working for two years as an Assistant Athletic Trainer responsible for women's athletics at the University of Rhode Island and receiving her Master of Science Degree in Physical Education, Ms. Oursler is currently pursuing a career in Athletic Training.

Ms. Oursler used her award to help in the completion of her undergraduate degree.

1979 - St. Louis, MO — **Robert Brian Lichtenberger**

Mr. Lichtenberger is currently a Health Education Teacher/Athletic Trainer at Wheeling High School in Wheeling, Illinois.

Mr. Lichtenberger used his award to help cover expenses for his senior year at Eastern Illinois University.

1979 - St. Louis, MO — **Lori J. Ferry**

At the time of award presentation, Ms. Ferry was a student at Lock Haven State College.

NATA UNDERGRADUATE SCHOLARSHIP AWARD RENAMED

SAYERS J. "BUD" MILLER SCHOLARSHIP AWARD

1980 - Philadelphia, PA — **Robert James Deppen**

Mr. Deppen is currently attending the Certificate Program in Physical Therapy at the Hahnemann Medical College and Hospital of Philadelphia.

Mr. Deppen used his award to help finance expenses during his senior year at Pennsylvania State University.

1981 - Ft. Worth, TX — **Michael Lee Matheny**

Mr. Matheny is a student at West Virginia University and received the award this June in Ft. Worth.

NATA EDDIE WOJECKI ACHIEVEMENT AWARD (sponsored by Larson Laboratories)

1974 - Kansas City, MO — **John P. Repsher**

At the time of award presentation, Mr. Repsher was a student at North Adams State.

1974 - Kansas City, MO — **Linda Jo Hammett**

At the time of award presentation Ms. Hammett was with the Department of Parks and Recreation, Kansas City, MO

1975 - Anaheim, CA — **Dennis G. Seeley**

Currently, Mr. Seeley is the Head Athletic Trainer at the University of Washington in Seattle. He is also an Associate in Orthopaedics in the School of Medicine at the University of Washington.

Mr. Seeley used his award to help cover expenses in the completion of his Master's Degree in Physical Education at the University of Nebraska in Lincoln.

1975 - Anaheim, CA — **Linda Weber Daniel**

Ms. Daniel is currently the Head Women's Trainer at The Ohio State University.

Ms. Daniel used her award to help cover expenses for graduate school.

1976 - Boston, MA — **Ann Graziadei**

At the time of award presentation Ms. Graziadei was a student at Indiana University.

1976 - Boston, MA — **Douglas W. Brand**

At the time of award presentation Mr. Brand was a student at the University of Washington.

1977 - Dearborn, MI — **Terry Malone**

Terry Malone is presently the Chairman of the Department of Physical Therapy at Indiana Central University.

Mr. Malone used his award to help cover expenses for attendance of the NATA Convention.

1978 - Las Vegas, NV — **Frank S. Harper**

Mr. Harper is presently Director of Physical Therapy and Sports Medicine at the Greenville Physical Therapy, Sports Medicine Clinic in Greenville, North Carolina.

Mr. Harper used his award to help with expenses in traveling to the NATA National Convention and in continuing education courses.

EDDIE WOJECKI ACHIEVEMENT AWARD (sponsored by Mueller Chemical Co.)

1979 - St. Louis, MO — **John F. Crowe**

Mr. Crowe is currently an Assistant Athletic Trainer/Therapist at the University of Iowa.

Mr. Crowe used his award for continuing education.

1980 - Philadelphia, PA — **Sandra J. Harms**

At the time of award presentation Ms. Harms was a student at Valparaiso University.

1981 - Ft. Worth, TX — **Linda Hubbard**

Ms. Hubbard is a student at the University of North Carolina. She received her award in Ft. Worth this June.

1981 - Ft. Worth, TX — **Thomas Woods**

Mr. Woods is a student at Indiana State University. He received his award in Ft. Worth this June.

NATA UNDERGRADUATE SCHOLARSHIP AWARD (sponsored by Elmers Weights)

1977 - Dearborn, MI — **Philip W. Samko**

At the time of award presentation, Mr. Samko was a student at the University of Connecticut.

1978 - Las Vegas, NV — **Eugene Selso Montano**

Mr. Montano is currently attending the Indiana Central University's graduate program in Physical Therapy.

Mr. Montano used his award to help cover expenses during his undergraduate work at California State University in Sacramento.

DAN ARNHEIM SCHOLARSHIP AWARD

(sponsored by Dan Arnheim)

1978 - Las Vegas, NV — **William D. Young**

At the time of award presentation, Mr. Young was residing in Signal Hill, California.

NATA UNDERGRADUATE SCHOLARSHIP AWARD

(sponsored by National Football League Charities)

1978 - Las Vegas, NV — **Sayers John Miller, III**

At the time of award presentation, Mr. Miller was a student at Pennsylvania State University.

1979 - St. Louis, MO — **Jeffrey L. Owens**

At the time of award presentation, Mr. Owens was a student at Eastern Kentucky University.

1980 - Philadelphia, PA — **Timothy Michael Madden**

Mr. Madden is currently a graduate student and Head Athletic Trainer at Pueblo High School in Tucson, Arizona.

Mr. Madden used his award to help cover expenses for his graduate work at the University of Arizona.

1981 - Ft. Worth, TX — **Russell G. Steves**

Mr. Steves is currently a student at the University of Pittsburgh and received his award this June in Ft. Worth.

WILLIAM F.X. LINSKEY SCHOLARSHIP AWARD

(sponsored by Johnson & Johnson)

1979 - St. Louis, MO — **Sayers John Miller, III**

At the time of the award presentation, Mr. Miller was beginning as a student at the School of Physical Therapy, Stanford University.

1980 - Philadelphia, PA — **Barbara Ellen Stokes**

Ms. Stokes recently completed her Bachelor of Science Degree from Eastern Illinois University.

Ms. Stokes used her award to help cover expenses during her undergraduate work at Eastern Illinois.

1981 - Ft. Worth, TX — **Patrick Andrew Favazza**

Mr. Favazza is currently a student at Central Michigan University and received his award this June in Ft. Worth.

POST GRADUATE SCHOLARSHIP AWARD

(sponsored by NATA)

1974 - Kansas City, MO — **William Jack Amos**

At the time of award presentation, Mr. Amos was a student at Furman University.

1975 - Anaheim, CA — **Charles R. Hawley**

At the time of award presentation, Mr. Hawley was a student at Northwest Missouri State University.

1976 - Boston, MA — **Donald Lee Kaverman**

Mr. Kaverman is currently the Coordinator of Sports Medicine at Ferris State College.

Mr. Kaverman utilized the award to further his education.

1977 - Dearborn, MI — **Allison L. Peirce**

Ms. Peirce recently resigned from the position of Assistant Athletic Trainer at Northern Arizona University.

Mr. Peirce used her award to help cover expenses during her graduate work at the University of Arizona.

1978 - Las Vegas, NV — **Hillary Anne Ennis**

At the time of award presentation, Ms. Ennis was a student at Muhlenburg College.

1979 - St. Louis, MO — **Margaret Mary Shoemaker**

At the time of award presentation, Ms. Shoemaker was a student at Muhlenburg College.

1980 - Philadelphia, PA — **Jean Marie Schulte**

At the time of award presentation, Ms. Schulte was a student at Temple University.

POST GRADUATE SCHOLARSHIP AWARD RENAMED

OTHO DAVIS POST GRADUATE SCHOLARSHIP AWARD

1981 - Ft. Worth, TX — **Cheryl Lynn Cole**

Ms. Cole is currently a student at California State in Fullerton and received her award in Ft. Worth this June.

CHUCK CRAMER SCHOLARSHIP AWARD

(sponsored by Cramer Products Incorporated)

1981 - Ft. Worth, TX — **John Allen Strong**

Mr. Strong is currently a student at Purdue University and received his award this June in Ft. Worth.

FRANK CRAMER SCHOLARSHIP AWARD

(sponsored by Cramer Products Incorporated)

1981 - Ft. Worth, TX — **Kevin Dale Roberts**

Mr. Roberts is currently a student at Boise State University and received his award this June in Ft. Worth.

NASEBY RHINEHART SCHOLARSHIP AWARD

(sponsored by NATA District 10)

1981 - Ft. Worth, TX — **Jeannie McCormick**

Ms. McCormick is presently a student at Washington State University and received her award this June in Ft. Worth.

DISTINGUISHED SERVICE AWARD

sponsored by

The American Academy of Orthopaedic Surgeons
for Sports Medicine

1981 - Ft. Worth, TX — **William E. Newell**

Mr. Newell is currently a Physical Therapist for the Student Hospital at Purdue University. He is Chairman of the NATA Committee on Grants and Scholarships.

CITIZENS SAVING ATHLETIC FOUNDATION HALL OF FAME

1962

*Roland Bevan
*Samuel E. Bilik M.D.
*William H. S. Bohm
David M. Bullock
Michael C. Chambers
Earl "Click" Clark
Charles Cramer
*Frank Cramer
Oliver J. DeVictor
Lilburn J. Dimmitt
Carl Erickson
William J. Fallon
Tad Gormley
*Jack Heppinstall
*Thomas Fitz Lutz
Frank H. Mann
Larnard "Lon" Mann
Michael Murphy
George "Doc" Nelson
Einar Nielsen

Herbert Patchin
Erastus W. Pennock
Michael Ryan
Claude "Big Monk" Simons
*Stanley M. Wallace
Frank Wandle

1963

none

1964

Elvin "Ducky" Drake
Mickey O'Brien
Henry Schmidt

1965

Walter Bakke
*Arthur Dickinson, Sr.
A.C. "Whitey" Gwynne
Frank Medina
Jules Reichel
Lloyd "Snapper" Stein

*Eddie Wojecki
*Edward G. Zanfrini

1966

E.J. "Jay" Colville
*Charles E. Harper
James Edward Hunt
*James W. Littlejohn
*Allen Sawdy
*Stephen W. Witkowski
*Alfred "Duke" Wyre

1967

*Bill Ferrell
*James H. Johnston
William F.X. Linskey
*Werner J. Luchsinger
Naseby Rhinehart
Howard E. Waite

1968

Robert Bauman
*Ernest Biggs

Carl Jorgensen
*Kenneth Rawlinson

1969

Wesley I. Knight
*James H. Morriss
*Richard A. Wargo

1970

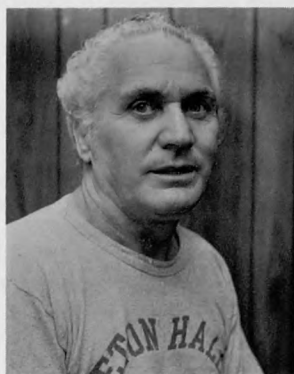
Joseph N. Abraham
Delmar Brown
Elmer Brown
*Richard Kent Cole
Dwayne "Spike" Dixon
*Samuel Randall Lankford

1971

Edward A. Byrne
Roland Logan
Charles E. Medlar

Ten NATA Members Enter Citizens Savings Hall of Fame

Ten NATA members inducted into the Citizens Saving Hall of Fame in Fort Worth Texas at the Annual Meeting held in June 1981.



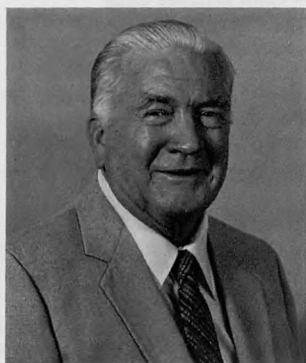
Edward Cappola
Seton Hall University



Otho Davis
Philadelphia Eagles



Thomas Healion
New England Patriots



Edward N. Motley
Virginia Polytechnic Institute



Oliver William Dayton (retired)
Killingsworth, Connecticut



Fred W. Hoover
Clemson University



Warren G. Morris
University of Georgia



Donald J. Fauls
Florida State University



Robert A. Peterson (retired)
Seattle, Washington



Buddy Taylor
Winston-Salem State University

Dean B. Nesmith
William B. Robertson

1972

Joseph Blankowitsch
William E. Newell

1973

none

1974

Edward Block
Anthony Frank Dougal
*Lincoln Tamotsu Kimura
*Ross Moore
*Laurence "Porky" Morgan
Wayne Rideout
Wayne Rudy

1975

Robert H. Gunn
C. Rodney Kimball
Edward A. Sulkowski
Charles W. Turner

1976

L.F. "Tow" Diehm
M. Kenneth Howard
Victor D. Recine
Gayle Robinson

1977

Warren Atrial
John Lacey
Eddie Lane
Jack Rockwell
Francis Sheridan
Robert White

1978

Z.M. "Mel" Blickenstaff
Martin Broussard
Earl "Bubba" Porche
George F. Sullivan
Thomas D. Wilson, Jr.

1979

Byron Bird
Robert Weingart

1980

Bobby Brown
Jim Conboy
Bruce Melin
*Sayers "Bud" Miller
Edward Pillings

* - Deceased

HONORARY MEMBERSHIP

1953

Robert G. Brashear, M.D.

1954

none

1955

none

1956

Charles W. Cramer
*Frank Cramer

1957

*S.E. Bilik, M.D.

1958

Mike Close

1959

Don O'Donoghue, M.D.

1960

none

1961

Charles Yocum

1962

none

1963

none

1964

Harry McPhee, M.D.
 *Augustus Thorndike, M.D.

1965

*Charles Burhard
 Fred V. Hein, Ph.D.
 O.B. Murphy, M.D.

1966

Donald L. Cooper, M.D.
 H. Kay Dooley, M.D.
 Cliff Fagan
 Jack C. Hughston, M.D.
 W. Clarke Wescoe, M.D.

1967

*Aaron Hessel

1968

Lowell W. Combs, M.D.
 Jack Cramer
 *James Gill
 Jud Hair, M.D.
 Frank C. McCue, III, M.D.
 Joseph W. Scholl

Edward T. Smith, M.D.
 David L. Thomas

1969

Samuel I. Fuenning, M.D.
 Daniel F. Hanley, M.D.
 Carl J. Herzog, Ph.D.
 Kenneth D. Rose, M.D.

1970

Herman J. Bearzy, M.D.
 G. Edward Crane, M.D.
 *James Feurig, M.D.
 Roland "Kickapoo" Logan
 John J. McGillicuddy, M.D.

1971

Del C. Humphrey
 *William D. Paul, M.D.
 Ed Reutinger
 W.K. Smith, M.D.

1972

David Arnold
 Joseph G. Pollard, M.D.
 Thomas B. Quigley, M.D.
 Fred C. Reynolds, M.D.
 Richard C. Schaefer

1973

Fred L. Allman, Jr., M.D.
 Lamont Henry, M.D.
 Marion A. Hubert, M.D.
 Americo Savastano, M.D.
 Walter C. Schwank
 Donald B. Slocum, M.D.

1974

Walter Byers
 Martin Delaney, Jr., M.D.
 A.O. Duer
 Harold Mundy
 Harvey O'Phelan, M.D.

1975

Frank Howard
 Robert K. Kerlan, M.D.
 *David Moyer, M.D.
 W.R. "Bill" Schroeder

1976

Victor Ippolito, M.D.
 *WW Patty, Ph.D.

1977

none

1978

Frederick L. Behling, M.D.
 Leslie Bodnar, M.D.
 Alfred H. Griess, M.D.
 Philip McFarland, M.D.
 Marcus J. Stewart, M.D.

1979

Robert D. Clinger
 Tom Coker, M.D.

1980

Carl Blyth, Ph.D.
 Vincent J. DiStefano, M.D.
 Fred Haislip
 James Nixon, M.D.
 Joseph Torg, M.D.
 Paul Trickett, M.D.

1981

Bernard R. Cahill, M.D.
 Thurston Dean, M.D.
 Robert C. Hamilton, M.D.
 Sam Morgan, M.D.
 Robert Vandermeer, M.D.
 Earl K. Wallace, Jr., M.D.

* - Deceased

25-YEAR AWARDS**1954**

Walter Bakke
 C.A. "Bob" Bauman
 Jay Colville
 *Earl Cripe
 *Ollie J. DeVictor
 Jack Happinstall
 James E. Hunt
 *George Nelson
 *Einar Nielson
 *Erastus W. Pennock
 Henry Schmidt
 George Stockwell
 Seymour Van Blake

1955

John P. Fadden
 *Tom Floyd
 *Charles E. Harper
 Frank G. Jones
 *W.J. "Dutch" Luchsinger
 *Thomas Fitz Lutz
 John F. McKinnon
 Herbert Patchin
 *John "Red" Sisley
 Bart F. Sullivan
 *Stanley M. Wallace

1956

James Benson
 *William M. Bostwick
 Charles "Win" Green
 Carl "Bud" Jorgensen
 John F. Rourke
 *Alfred J. "Duke" Wyre

1957

*Richard K. Cole
 *Arthur D. Dickinson, Sr.
 Frank Foley
 John D. Kammer
 Joseph Kearns
 Rudy Schneider
 *Steve Witkowski

1958

A.C. "Whitey" Gwynne
 Robert Peterson
 Jules Reichel
 Howard Waite
 Jack Williamson
 Herman Wrigley

1959

none

1960

*Roosevelt Collins
 Naseby Rhinehardt

1961

Lloyd Stein

1962

Wesley Knight

1963

Charles W. McDowell
 Dean Nesmith
 John Nevin

1964

*Wilbur Bohm
 Carl Bruner
 Ernest Hudak
 D. Conrad Jarvis
 *James H. Johnston
 Frank Kavanaugh
 *James Littlejohn
 M.J. O'Brien
 *Davis Sandlin
 *Edward Zanfrini

1965

*L.J. "Packy" Boyle
 Ed Byrne
 *Herb Gulick
 *Emil A. Havach
 Rev. Jerome Healy
 *Sam Lankford
 Louis J. Leone
 William F.X. Linskey
 *Herman McGee
 Frank Medina
 *John Noonan
 Robert Officer
 *Edward J. Wojecki

1966

Delmer Brown
 William D. Dayton
 *Frederick M. Holmes
 *Jim Morris
 Ralph Pritts
 Frank A. Redd
 Michael A. Stang
 Frank J. Wiechec

1967

Robert Ainsworth
 *Ernest Biggs
 Elmer Brown
 James Emmerich
 *Bill Ferrell
 C. Rodney Kimball
 Leo W. Klein
 Joseph Langi
 *Ken Rawlinson
 Victor D. Recine
 *Al Sawdy
 *Richard Wargo

1968

Joseph N. Abraham
 Dwayne "Spike" Dixon
 J.C. "Dutch" Reinhardt

1969

*George Busenberg
 Robert Spackman

1970

Joe Blankowitsch
 Anthony Dougal
 Birger Johnson
 John Johnson
 *Lincoln Kimura
 *Charles Kruzan
 *Laurence "Porky" Morgan
 *Bill Robertson

1971

Warren Ariail
 August T. Bonanne
 Eddie Froelich
 Chester Grant
 Ken Hawks
 Leonard McNeal
 Charles Medlar
 Leo Murphy
 William "Pinky" Newell
 Robert E. Shelton
 Robert W. Sinkler
 Bruce E. Vogelsong
 Robert E. Weingardt
 Lewis H. Williams

1972

*Joseph Begala
 Byron Bird
 Edward Block

LeRoy J. Brandimore
 Martin Broussard
 Richard E. Carr
 Dr. Alden Coder
 Walter Grockowski
 Joseph Kuczo
 *Ross Moore
 William Morrow
 Richard O. Morsch
 Lenwood Paddock
 Earl J. "Bubba" Porche
 Wayne Rideout
 Joe Romo
 Leon "Red" Romo
 Wayne Rudy
 *Thomas Sheehan, Sr.
 Thomas Sullivan
 Ray West

1973

H.L. "Buck" Aniel
 Brady Greathouse
 Leo J. Hamel
 Kenny Howard
 Hal F. Knowlton
 *Roger McGill
 Gayle Robinson
 Edward Sulkowski

1974

Edgar "Hal" Biggs
 L.R. "Tow" Diehm
 Kenneth Gearhart
 Robert H. Gunn
 Richard Ilano
 Thomas Monforti
 Grady Morgan
 William Samko
 Francis Sheridan
 Charles "Doc" Turner
 Joe Worden

1975

Joseph R. Altott
 William Black
 Prosper F. Cima, Sr.
 Kurt Grimm
 *Robert F. Hand
 John E. Lacey
 Bruce Melin
 Edward J. Pillings
 John D. "Jack" Rockwell
 Paul J. Schneider

**THE
RA-GESIC
THERA-GESIC
C® THERA-GESIC
ESIC® THERA-GESIC
A-GESIC® THERA-GESIC
ERA-GESIC® THERA-GESIC
THERA-GESIC®**

THERA-GESIC®
provides rapid,
effective analgesic,
anti-inflammatory
action to relieve
pain, stiffness
and soreness.



Frank Semanick
George F. Sullivan
Raymond V. Ulinski
William L. Wild

1976

George Anderson
Z. Mel Blickenstaff
Robert Kenneth Brown
Jack Butoroc
Edward Coppola
H. Norman Hommas
Eddie Lane
Andrew Sivess
Joseph Stanitis
Francis "Biff" Stannard
Fred Wappel
Robert C. White
Thomas D. Wilson, Jr.

1977

Walter Koch
Larry Harrington
Ned Linta

Nicholas Maurillo
Francis Poisson
Henry "Buddy" Taylor

1978

Harold Blackwell
Jim Conboy
John Gimmier
Louis Grevelle
Eugene Harvey
Fred Hoover
Victor Keedy
R.A. "Bobby" Lane
Fritz Massmann
Melvin Moretti
Warren Morris
Albert Rector
C. Roy Rylander

1979

Donald Fauls
Thomas Healon
Mike Linkovich

1980

John Herman Bunch
Arno Buntrock
Otho Davis
Charles Demers
Jack Jones
Kerkor Kassabian
Charles Kerr
Paul Kichline
Robert Lewis Martin
*Sayers "Bud" Miller
Edward Motley

1981

Jack B. Aggers
Alan S. Crawshaw
Christopher Kevatos
James D. Nice
Billy Pickard
John Sciera
Charles W. Taylor

* - Deceased

NATA RETIRED CERTIFIED ATHLETIC TRAINERS

- | | | |
|------------------------------|--------------------------|-----------------------------|
| 1. Ainsworth, Robert R. | 32. Gwynne, A.C. | 63. Paddock, Lenwood |
| 2. Bakke, Walter B. | 33. Herman, Ken | 64. Peterson, Robert |
| 3. Barbano, Rudolph | 34. Hunt, James E. | 65. Rector, Albert W. |
| 4. Black, William | 35. Illiano, Richard | 66. Reichel, Jules |
| 5. Blackwell, Sr., Harold J. | 36. Jones, Blandford | 67. Rice, Glen H. |
| 6. Blankowitsch, Joe | 37. Jorgensen, Carl W. | 68. Sandlin, Davis |
| 7. Blickenstaff, Z.M. | 38. Kammer, John | 69. Schmidt, Henry P. |
| 8. Block, Edward | 39. Kavanagh, Frank | 70. Schneider, Rudolph |
| 9. Brown, Delmer | 40. Kennedy, Dan P. | 71. Schroeder, Henry |
| 10. Brown, Elmer | 41. Kichline, Paul J. | 72. Semanick, Frank |
| 11. Bruner, Carl | 42. Kimball, Rodney | 73. Semon, William R. |
| 12. Buntrock, Arno | 43. Kinzer, Ced | 74. Semple, John |
| 13. Byrne, Eddie A. | 44. Knight, Wesley | 75. Shelton, Robert E. |
| 14. Callahan, Leo A. | 45. Knowlton, Hal | 76. Sheridan, Francis J. |
| 15. Carr, Richard E. | 46. Koch, Walter O. | 77. Stein, Lloyd |
| 16. Cassell, Frank | 47. Konseck, Alfred | 78. Sullivan Jr., Thomas F. |
| 17. Coder, Alden C. | 48. Korbmacher, John | 79. Tilley, Glenn |
| 18. Colville, Jay | 49. Lankford, Sam R. | 80. Tobler, R. Earlin |
| 19. Dayton, William | 50. Lanzi, Joseph R. | 81. Turner Dr., Charles W. |
| 20. Dixon, Dwayne | 51. Leighton, Guy | 82. Vogelsong, Bruce A. |
| 21. Donaho, Cecil E. | 52. Linskey, William | 83. Waite, Howard |
| 22. Dougal, Tony | 53. Maxtutis, Albert | 84. West, Raymond O. |
| 23. Drager, Hubert L. | 54. McGory, Thomas J. | 85. Wiechec, Frank J. |
| 24. Evans, Ralph | 55. Meck, Chester R. | 86. Wike, Dave |
| 25. Fitzpatrick, Thomas | 56. Michler, Clifford | 87. Williams, Lewis H. |
| 26. Fry, William | 57. Miller, Stewart E. | 88. Williamson, John |
| 27. Gearhart, D. Kenneth | 58. Moore, Hamilton A. | 89. Willoughby, Walter D. |
| 28. Gibbs, Alphonse G. | 59. Morgan, Grady | 90. Wilson, Arthur |
| 29. Goodish, William | 60. Morsch, Richard O. | 91. Wylder, Al |
| 30. Grant, Chester | 61. O'Brien, M.J. | |
| 31. Green, John C. | 62. O'Donnell, Edward D. | |

NATA RETIRED ATHLETIC TRAINERS

(not certified)

- | | | |
|--------------------------|-----------------------|--------------------------|
| 1. Burbacher, Charles R. | 9. Healy, Jerome | 17. Shaw, Charles M. |
| 2. Chilletti, Frank F. | 10. Heinecke, Edward | 18. Sheldon, Frederic J. |
| 3. Dahl, Charles C. | 11. Hicklin, Harry | 19. Spielman, Adriane |
| 4. Decamp, Leslie | 12. Janto, Harold A. | 20. Wild, William L. |
| 5. Doller, Joe | 13. Klein, Karl K. | 21. Wilson, Judson D. |
| 6. Dubuque, Joseph G. | 14. Naros, Harold | 22. Zimmer, Harry + |
| 7. Flexman, Edward | 15. Pritts Sr., Ralph | |
| 8. Gallegos, Pat | 16. Scannell, Patrick | |

Announcing ...

**The 4th
Annual
NATA Student
Writing Contest**

See details on page 216.

Potpourri



Dennis Aten, ATC, RPT, MS
Eastern Illinois University

Batting Eye

from June, 1981 *Reader's Digest*

The council on Sports Vision recently reported that many athletes have a visual "handicap" that actually is an asset in baseball. The problem, called cross dominance, is a disadvantage in academic work but becomes an advantage to the average baseball player when he is up to bat.

Crossed dominance means that a right-handed person has a dominant or stronger left eye, and vice versa. For a batter, this is a great boost; it helps him pick up the flight of the baseball, as he can sight it from the proper angle, the opposite eye to the batting hand. The player with normal vision actually has to open his batting stance to compensate for the dominate eye being away from the pitcher. Although crossed dominance is not as common among the general population--about 20 percent have this abnormality--more than 5-percent of the 250 major-league players tested had this unusual affliction.

Sports Vision

The American Optometric Association has a sports vision section and devoted the entire issue of their July 1980 journal to sports vision. A directory of the membership of the sports vision section is available from the American Optometric Association, 243 North Lindbergh Blvd., St. Louis, MO 63141, 314/991-4100. This section encourages athletic trainers to be aware of their members and to feel free to call upon their services regarding visual problems in your athletic programs.



TELL A FRIEND ABOUT
ATHLETIC TRAINING

Fat Factor

Reported in *Reader's Digest*

An enzyme abnormality has been discovered in the red blood cells of some people who are overweight. It's the first clue that obesity in humans may be caused by a biochemical defect - not simply by overeating.

According to a report in the *New England Journal of Medicine*, researchers at the Beth Israel Hospital in Boston found that 21 obese volunteers had lower levels of a special enzyme when compared with 28 individuals of normal weight. With low levels of this enzyme - which functions as a pump, transporting potassium and sodium in and out of cells - less energy may be used. Thus, fewer calories are burned up as heat, while more are stored as fat.

"For the first time," says Dr. Jeffrey S. Flier of Beth Israel Hospital, "we have a possible biochemical difference in obese individuals that tells us why some people seem predisposed to obesity and have trouble losing weight."

Baseball Executive Discuss Alcoholism

from the National Clearinghouse for Alcohol Information
of the National Institute on

Alcohol Abuse and Alcoholism, June 30, 1981

The First Major League Baseball Conference on Alcohol and Drug Addiction, held recently in San Diego, brought together baseball players, executives, team owners, and treatment professionals to discuss the economic and social aspects of alcoholism, how it affects the performances of athletes, and how employee assistance programs (EAPs) can be implemented.

The 2-day event was sponsored by the San Diego Padres professional baseball team and Operation Cork, a national nonprofit alcohol education program of The Kroc Foundation. At present, two teams, the Padres and the Los Angeles Dodgers, have EAPs, while several others are studying the idea.

Operation Cork premiered a new youth-oriented film, *Dugout*, in which former Los Angeles pitcher Bo Belinsky talks to young baseball players about alcohol and drug use. Belinsky addressed the conference, as did two other players who are also recovering from alcoholism: former Brooklyn Dodger pitcher Don Newcombe, and Los Angeles Dodger pitcher Bob Welch. Newcombe is now a consultant to the Dodgers in their EAP. The Padres' EAP was developed by Operation Cork. In addition, Operation Cork has made available to professional baseball teams a package of materials on alcoholism, including information on early warning signs of alcoholism, a physician's referral list, the National Council on Alcoholism's 26 questions on the symptoms of alcoholism, and suggested reference materials.

Also addressing the conference were Bowie Kuhn, commissioner of baseball; James Kemper, chairman of the board of Kemper Insurance Co.; Joseph Pursch, MD, Corporate medical director of Comprehensive Care Corp; Joe Takamine, MD, an alcoholism specialist with St. John's Hospital in Los Angeles; Ballard Smith, president of the Padres; and Joan Kroc, founder of Operation Cork, P.O. Box 2868, La Jolla, CA 92038.

Heat or Cold

from Clinical Management in Physical Therapy

According to the observations of Frank Allender and Eugene Michaels the following concept may be worth considering when deciding whether to use heat or cold for relief of pain. Persons who prefer a warm environment may respond better to the therapeutic application of cold, and persons who prefer a cool environment may respond

better to therapeutic applications of heat. We even find that physical therapists who express a preference for using cold therapeutically prefer a warm environment themselves, and vice versa.

Are We Taught to be Sick?

Reported in *Family Weekly*

Young adults who report the greatest number of physical complaints - muscle pains, indigestion, headaches, etc. - are likely to have parents who themselves frequently complained about such symptoms and who often kept their children home from school because of similar ailments, real or imagined.

In a study that spanned nearly 20 years, sociologist David Mechanic concluded that parents who are over-anxious about illness unconsciously "teach" their children to focus on internal feelings. They may be encouraging a long-term tendency in the youngsters to overreact to every minor twinge.

Overweight Americans

Reported in *Family Weekly*, a newspaper magazine

Nearly 20 percent of all Americans are overweight, reports the Heath Insurance Institute. For persons past the age of 40, the figure jumps to a startling 35 percent. Moreover, as many as 40 percent of all school-age children are overweight, and nearly 85 percent of those children will remain obese as adults.

Eye Injury Prevention

from USSA News November/December 1980

About 35,000 eye injuries were suffered by Americans in sport and recreation last year, with racquet games leading the way for adults. In response to this increasing

problem, the National Society to Prevent Blindness has brought together experts in athletics and medicine to devise a national campaign promoting eye safety in sports. The committee has endorsed efforts encouraging players to wear protective eyewear, noting that such devices dramatically reduce the chance and severity of injury.

For more information on eye prevention for racquet sport players, write the National Society to Prevent Blindness, 79 Madison Ave., New York, NY 10016.

Over the Counter Drugs

Reported in *Family Weekly*

Seven out of 10 Americans treat their minor health problem with over-the-counter drugs, reports *Drugs Topics* magazine. One out of every four persons said that he was likely to care for his own health problems, although more women than men are likely to treat themselves with over-the-counter drugs. Most consumers say they self-medicate because it saves them a trip to the doctor and the doctor's fees. Many also indicated that they rely on the pharmacist to recommend medication.

Secondhand Death

April, 1981 *Reader's Digest*

A major study in Japan, spanning 14 years and 265,000 people, found that nonsmoking women married to heavy smokers were twice as likely to die of lung cancer as women married to nonsmokers. One finding highlighted the severity of "passive" smoking when it revealed that it caused from one-third to one-half as much harm as direct smoking. It is felt that this indirect exposure to cigarette smoke is related to more lung cancer than smoking in Japan because so few of their women smoke. The results of this study appear to strengthen the case for banning public smoking. +



ELIMINATE GERMS . . .

AND MESS . . .

WITH B&G PORTABLE FOUNTAINS

B&G PORTABLE FOUNTAINS for a sanitary, no-litter drink

Germs don't have a sporting chance against the sanitary mouthguards of B&G portable fountains. Whichever model you choose, you'll get a heavy-duty fountain that will outlast several teams.

The polyethylene tank of B&G's Outdoor Portable Drinking Fountain (WB-4S) holds 5 gallons.

Actiondrink (model AD400, not illustrated) holds 4 gallons of water or concentrated energy drinks.

B&G has a complete line of portable water fountains. . . for any budget.

B&G Equipment Company

Applebutter Rd. Plumsteadville, Pa. 18949
Telephone: (215) 766-8811

Guide to Contributors

Athletic Training, the Journal of the National Athletic 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. Seven copies of the manuscript should be forwarded to the editor and each page typewritten on one side of 8½ x 11 inch plain paper, triple spaced with one inch margins.
2. Good quality color photography is acceptable for accompanying graphics but glossy black and white prints are preferred. Graphs, charts, or 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. Tables must be typed, not hand written. Personal photographs are encouraged. All art work to be reproduced should be submitted as black and white line art (either drawn with a Rapidograph [technical fountain pen] or a velox stat or PMT process) with NO tonal values, shading, washes, Zip-a-tone — type screen effects, etc. used.
All artwork to be reproduced in black plus a second (or more colors) should be submitted as black and white line art (see above paragraph), with an Amberlith® or similar-type overlay employed for each area of additional color(s). Also, all areas of tonal value, shading, "washes", etc. should also be supplied on a separate clear or frosted acetate or Amberlith® overlay. In addition, all areas to be screened (a percent or tint of black or color) should be supplied on an Amberlith® overlay.
3. The list of references and citations should be in the following form: a) books: author, title, publisher with city and state of publication, year; b) articles: family names, initials and titles of all authors, title of article, journal title, with abbreviations accepted as per Index Medicus, volume, page, year. Citations in the text of the manuscript will take the form of a number in parenthesis, (7), directly after the reference or name of author being cited, indicating the number assigned to the citation bibliography. Example of references to a journal, book, chapter in an edited

book, and presentation at a meeting are illustrated below:

- a. Knight K: Preparation of manuscripts for publication. *Athletic Training* 11(3):127-129, 1976.
 - b. Klafs CE, Arnheim DD: *Modern Principles of Athletic Training*. 4th edition. St. Louis, CV Mosby Co. 1977 p. 61.
 - c. Albohm M: Common injuries in women's volleyball. *Relevant Topics in Athletic Training*. Edited by Scriber K, Burke EJ, Ithaca NY: Monument Publications, 1978, pp. 79-81.
 - d. 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 Vegas, Nev, June 15, 1978.
4. In view of *The Copyright Revision Act of 1976*, effective January 1, 1978, all transmittal letters to the editor must contain the following language before manuscripts can be reviewed for possible publication: "In consideration of the NATA taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns or otherwise conveys all copyright ownership, to the NATA in the event that such work is published by the NATA." We regret that transmittal letters not containing the foregoing language signed by all authors of the manuscript will necessitate return of the manuscript.
Manuscripts are accepted for publication with the understanding that they are original and have been submitted solely to *Athletic Training*. Materials taken from other sources, including text, illustrations, or tables, must be accompanied by a written statement from both the author and publisher giving *Athletic Training* permission to reproduce the material. Photographs must be accompanied by a signed photograph release form.
Accepted manuscripts become the property of the Journal. For permission to reproduce an article published in *Athletic Training*, send requests to the Editor-in-Chief.
 5. Manuscripts are reviewed and edited to improve the effectiveness of communication between the author and the readers and to assist the author in a presentation compatible with the accepted style of *Athletic Training*. The initial review process takes from six to eight weeks. The time required to process a manuscript through all phases of review, revision, and editing, to final publication is usually six to eight months depending on the timeliness of the subject. The author accepts responsibility for any major corrections of the manuscript as suggested by the editor.

If time permits galley proofs of accepted papers will be sent to the author for corrections prior to publication. Reprints of the article may be ordered by the author at this time.

6. It is requested that submitting authors include a brief biographical sketch and acceptable black and white glossy photograph of themselves. Please refrain from putting paper clips on any photograph.
7. Unused manuscripts will be returned, when accompanied by a stamped, self-addressed envelope.

Address all manuscripts to:

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

The following recommendations are offered to those submitting CASE HISTORIES:

1. The above recommendations for submitting manuscripts apply to case studies as well but only two-copies of report need be sent to the Editor-in-Chief.
2. All titles should be brief within descriptive limits. The name of the disability treated should be included in the title if it is the relevant factor; if the technique or kind of treatment used is the principal reason for the report, this should be in the title. Often both should appear. Use of subtitles is recommended. Headings and Subheadings are required in the involved report but they are unnecessary in the very short report. Names of patients are not to be used, only 3rd person pronouns.
3. An outline of the report should include the following components:
 - a. Personal data (age, sex, race, marital status, and occupation when relevant)
 - b. Chief complaint
 - c. History of present complaint (including symptoms)
 - d. Results of physical examination (Example: "Physical findings relevant to the physical therapy program were ...")
 - e. Medical history - surgery, laboratory exam, etc.
 - f. Diagnosis
 - g. Treatment and clinical course (rehabilitation until and after return to competition) use charts, graphs when possible
 - h. Criteria for return to competition
 - i. Deviation from the expected
 - j. Results - days missed

4. Release Form

It is mandatory that *Athletic Training* receives along with the submitted case a signed release form by the individual being discussed in the case study injury situation. Case studies will be returned if the release is not included.

The following recommendations are offered to those submitting material to be considered as a TIP FROM THE FIELD:

1. The above recommendations for submitting manuscripts apply to tips from the field but only one copy of the paper need be sent to the Editor-in-Chief.
2. Copy should be typewritten, brief, concise, in the third person, and using high quality illustrations and/or black and white glossy prints.

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

Ken Wolfert
111 Buckeye Street
Hamilton, OH 45011

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

Journal	Deadline
Fall Issue	June 15
Winter Issue	September 15
Spring Issue	December 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	June 15
Winter Issue	September 15
Spring Issue	December 15
Summer Issue	March 15

Manuscripts must be sent to:

Clint Thompson
Jenison Gym
Michigan State University
East Lansing, Michigan 48824
(517) 353-4412

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

Elongated Anterior Cruciate Strip Technique

Marty Bradley MS, ATC, EMT

In 1979-80 a Lady Monarch basketball player received a serious valgus knee injury during early pre-season training. She subsequently underwent a successful "5 in 1" knee reconstruction and rehabilitation.



Figure 1

During a pick-up game in late spring 1980, while wearing a Lennox-Hill brace, she reinjured the same knee. Surgery was not necessary, but she was left with medial collateral ligament laxity and slight rotary instability that allowed her to rotate over the Lennox-Hill medial condular pad on external rotation of the lower leg. As a result, she had to wear tape under the brace for more support and protection. This all elastic taping technique included conventional anterior cruciate and medial collateral ligament strips. However, even with the taping procedure and wearing a refitted Lennox-Hill brace, she still twisted the knee three subsequent times during the 1980-81 season.

It was very evident that the taping technique and brace were not protecting her. After much trial and error with collateral and anterior cruciate strip variations, we developed the elongated anterior cruciate strip technique which prevented any further knee twisting episodes and increased her confidence one hundred percent. The

Mr. Bradley is the Head Athletic Trainer at Old Dominion University, Norfolk, Virginia 23508.

technique was designed to grasp the distal ankle - lower leg and prevent excessive external rotation of the lower leg at the knee. It has been found to work more effectively in this athlete than the conventional anterior cruciate technique for preventing external rotation of the lower leg at the knee.



Figure 2

The technique involves two basic strips, although more can be added if needed. Strip #1 begins on the plantar surface of the posteromedial arch and winds laterally around the achilles tendon (Fig. 1). The strip continues on an upward medial swing around the lower leg to the posteromedial knee joint (Fig. 2) and around the thigh. (Fig. 3). Strip #2 begins on the plantar surface of the posteromedial heel (Fig. 4) and continues upward in a similar proximal cork screw fashion, but crosses more medially at the knee joint ending in the upper thigh. (Fig. 5 & 6). The distal strips are best anchored by an ankle strapping technique (Fig. 7). The rest of the technique is anchored in the usual way with any knee strapping technique (Fig. 7 & 8).

Editor's Note: Anyone wishing to have an idea, technique, etc. considered for this section should send one copy to Ken Wolfert, 111 Buckeye Street, Hamilton, Ohio 45011. Copy should be typewritten, brief, and concise, using high quality illustrations and/or black and white glossy prints. +

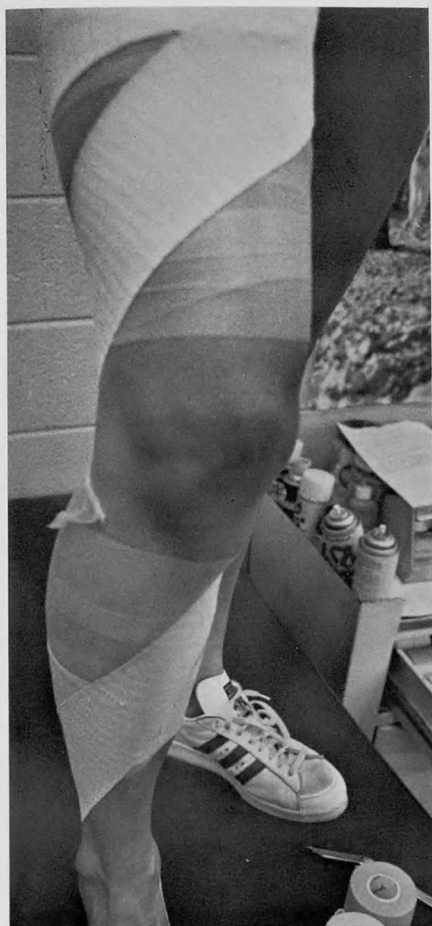


Figure 3



Figure 4



Figure 5



Figure 6

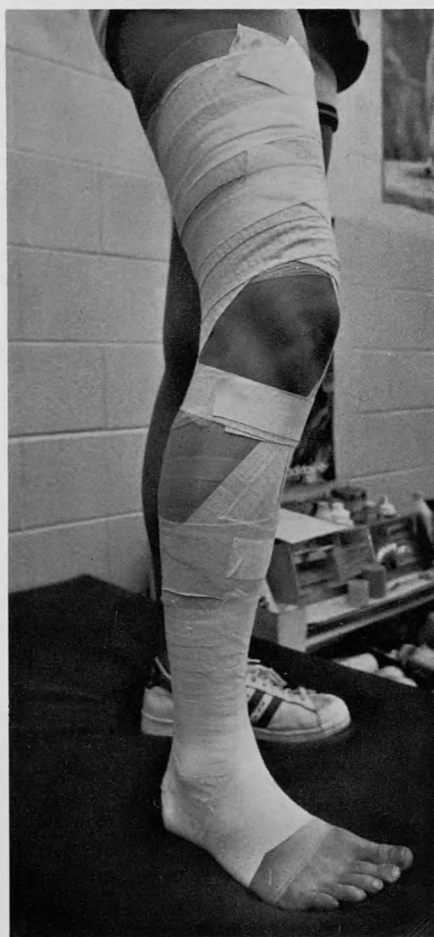


Figure 7



Figure 8

Have You Seen This?

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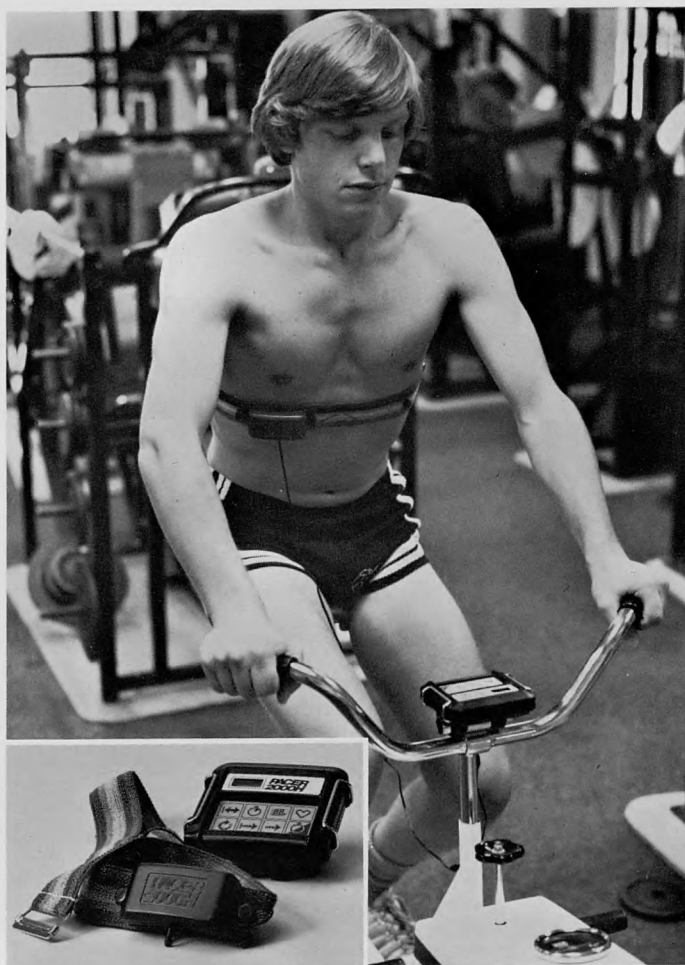
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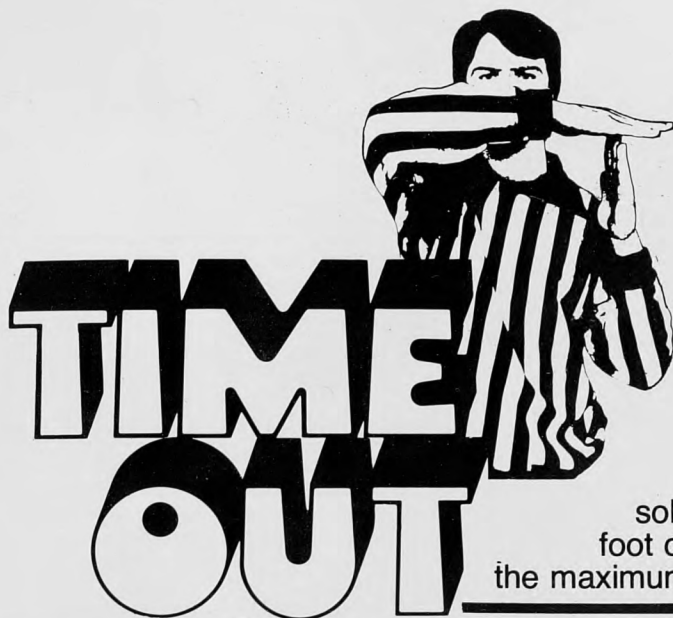
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PATRONIZE ATHLETIC TRAINING ADVERTISERS

Fourth Annual NATA 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, 1982. **NATA Student Writing Contest, c/o Dr. Ken Knight, Men's Physical Education, Indiana State University, Terre Haute, Indiana 47809.**



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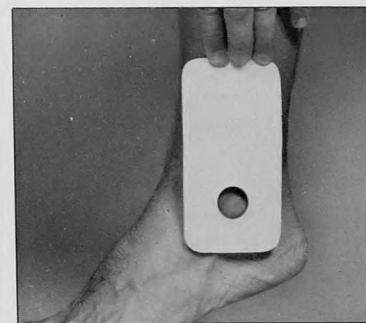
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