IN THIS ISSUE:
Ligament Ruptures Produced by Forced Inversion of Cadaver Ankles
A Case Report: Lower Leg Compartment Syndromes
Special Pads for Special Problems
The Importance of Isokinetic Power and Its Specificity to Athletic Conditions

VOLUME 14
NUMBER 2
SUMMER 1979
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ATHLETIC TRAINING
THE JOURNAL OF
THE NATIONAL ATHLETIC TRAINERS ASSOCIATION

VOLUME 14 NUMBER 2 SUMMER 1979
The National Athletic Trainers Association

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Dear N.A.T.A. Member:

I am looking forward to seeing you at our 30th Annual Meeting and Clinical Symposium in St. Louis. This should be an excellent meeting thanks to the hard work of District Nine. There are going to be a lot of important issues discussed and I hope those of you attending will try to attend the National Business meeting and your particular District meeting.

The N.A.T.A. task force met with the A.P.T.A. task force on February 17th in San Francisco. We once again covered the areas of mutual concern. Bob Behnke and Don Chu will attend the A.P.T.A. meeting in Atlanta prior to our meeting in St. Louis. They will have a report for your board and this report will be discussed at the District meetings. I anticipate being able to give you pertinent directions for your licensure efforts in St. Louis.

Our Executive Director sent you a Release of Medical Information form. If you are asked to release medical information about any of your student athletes, you are urged to use the form. This complies with HEW regulations and is for YOUR protection!

Again, I'm looking forward to seeing each of you in St. Louis. Feel free to let your District Director or me know how we can best serve our association.

Sincerely,

William H. Chambers
President

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HOW TO HEAL THE WHOLE ATHLETE
To the Editor:

I write this both as a student trainer and an ambulance corp volunteer having just returned from a call to a gym to aid an athlete with what was called in as a fractured leg. The student, a senior in high school, was doing a dismount in a gymnastics match when he suffered an open fracture of the right tibia. On our arrival at the scene instant cold packs and an air splint had been applied and a blanket had been placed over the athlete. Evidently the school didn’t have a trainer; the coach and athletic director filling the role. However, it was not clear to us, the ambulance crew, who was in charge as it appeared each person thought he was in charge. The coaches and other school officials all wanted to help (none of them appeared to have any training) but they all got in the way. It was uncertain to the athlete and to us who put on the cold packs and air splint. No one approached us explaining what had happened, what had been done, or that there was an open fracture; their only concern was speed in moving the athlete onto our litter and getting him to the hospital. So anxious were they in that task that they had the athlete lifted off the mat before our litter was ready causing him more discomfort. If this was not bad enough we did not discover that the fracture was an open one until the hospital removed the school’s splint and cold packs to find an uncovered, contaminated open wound and fracture.

There are many points that can be learned from this episode, however, the one which I would like to emphasize is communications between school officials and ambulance personnel. I feel that I am in a unique position as having both called ambulances and responded in ambulances. When calling an ambulance it is imperative that the personnel know what type of injury they are being called for and exactly where the athlete is. The former is important so the crew can bring the proper equipment (e.g. splints for fractures vs. oxygen for drowning and heart problems) with them from the ambulance to the athlete to save time. The location is essential because with most gyms and pools having many entrances it might take five minutes for the ambulance to find the right building let alone the correct entrance. Optimally there should be a school official (possibly a student) outside of the building or at the entrance to flag the ambulance crew down and direct them to where the athlete is, also, to confirm the nature of the injury. It is probably best to contact the ambulance corp at the beginning of the school year and obtain their help in establishing a plan if an ambulance is needed; possibly even giving them maps of the layout of the athletic complex. Luckily, in athletics it is not that common to require ambulance assistance. But, unfortunately, because of that whenever an ambulance is called panic sets in and the situation ends up being chaotic. At the scene of an injury there should be one person in charge, preferably a certified athletic trainer. But, since many schools still don’t have certified trainers it should be the most trained person. Every coach should be trained in at least Standard First Aid and CPR (cardiopulmonary resuscitation). At such incidents, as happened in the one above, everyone wanted and tried to be as “helpful” as possible so that it ended up most people became a nuisance and in the way. No one spoke up to tell us what had happened or what had been done, whereas if one person was in charge the obvious open fracture would not have gone unnoticed. Because the ambulance crew does not frequently respond to the school’s athletic complex it is easy to understand how the situation occurred. In that vein, I write this letter in the hope that by bringing this situation to the attention of athletic trainers and other athletic personnel other problems like this one will not happen again. It is imperative that schools contact the ambulance squads that service them to solicit ideas and work out plans if an ambulance is needed. With the increased training that ambulance personnel are receiving they can be a valuable aid to the athletic trainer (e.g. splinting and transporting fractures and back injuries). The trainer and ambulance attendant can work together to lessen the trauma and shock of an injured athlete or work against each other causing increased pain and shock for the injured athlete. It is hoped that through good communications before the need arises we can provide the best care for our athletes.

Peter A. DeMaria, Jr.
Glenside, PA 19038
JOURNAL
DEADLINES

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

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

Rod Compton, ATC
Sports Medicine Division
East Carolina University
Greenville, NC 27834

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

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

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

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Articles must be sent to:

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

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CALENDAR OF EVENTS

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

JUNE, 1979

4-8 Athletic Injuries Workshop, Southeastern Oklahoma State University, Durant. Contact Dr. Don Parham, Director of Athletics, Southeastern Oklahoma State University, Durant, Oklahoma 74701.


16-20 NATA 30th Annual Meeting and Clinical Symposium, St. Louis, Missouri. Contact NATA, P.O. Box 1865, Greenville, North Carolina 27834.


24-27 5th Annual Seminar on Sports Medicine, Maine Maritime Academy. Contact Len Tyler, Maine Maritime Academy, Castine, Maine 04421.


JULY, 1979

6-7 Southeastern Athletic Trainers Association, District 9, Third Annual Meeting, Suwanee, Georgia. Contact Steve Moore, Tennessee Tech, Box 5102, Cookeville, Tennessee 38501.


9-13 32nd Annual American Corrective Therapy Association Scientific and Clinical Conference, Portland, Oregon. Contact J.R. Malpass, Conference Chairman, 13130 SW 61st Avenue, Portland, Oregon 97219.


16-18 Student Trainer Workshop, University of Southern Mississippi, Hattiesburg. Contact Jim Gallaspy, A.T.C., Box 8461, Southern Station, Hattiesburg, Mississippi 39401.

16-20 The University of Central Florida (formerly Florida Technological University) 3rd Annual Sports Medicine Workshop, Orlando. Contact Ronald R. Ribaric, A.T. C., Head Athletic Trainer, Box 25000, Orlando, Florida 32816.

19-21 25th Anniversary Meeting of the Southwest Athletic Trainers Association, District 6, Waco. Contact Aubry Fisk, Trinity High School, 500 N. Industrial, Eulissa, Texas 76039.


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Salt Lake City, Utah June 11-14
Colorado State University
Fort Collins, Colorado June 25-28
Florida State University
Tallahassee, Florida June 25-28
University of Illinois
Champaign, Illinois June 25, 28
Kent State University
Kent, Ohio June 25-28
Southern Methodist University
Dallas, Texas June 25-28
Clemson University
Clemson, South Carolina July 9-12
Southwest Texas State University
San Marcos, Texas July 9-12
University of Tulsa
Tulsa, Oklahoma July 9-12

North Adams State College
North Adams, Massachusetts July 16-19
Vanderbilt University
Nashville, Tennessee July 16-19
Emporia State University
Emporia, Kansas July 23-26
University of Maryland
College Park, Maryland July 23-26
California State University-Chico
Chico, California July 30-Aug. 2
Grand Valley State College
Allendale, Michigan July 30-Aug. 2
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Moscow, Idaho July 30-Aug. 2
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EDITORIAL COMMENT

YOUR ASSOCIATION & THE U.S.O.C.
SPORTS-MEDICINE COMMITTEE

Bill Chambers
NATA President

The N.A.T.A. Board of Directors unanimously voted at the mid-year Board meeting to discontinue the present N.A.T.A. selection process of Athletic Trainers for the various Olympic and International Games. This action was prompted by the total disregard for the N.A.T.A.'s offer to help in these selections by the U.S.O.C. Sports Medicine Committee.

Four years ago a project to develop a universal procedure for all districts to follow was started. After some revisions and discussions we felt a vehicle had been worked out that would be fair to all N.A.T.A. members as well as provide the best people to care for the athletes representing the United States.

At the Dearborn meeting a representative of the U.S.O.C. Sports-Medicine Committee spoke, at length, to your Board of Directors. A lot of time was spent listening to how the U.S.O.C. wanted to work with N.A.T.A. and we were encouraged they'd use the selection guidelines we had established. Also your Board was asked to go to the various exhibitors in Dearborn and ask for supplies to be donated to the U.S.O.C. Training Center.

One year later at our Las Vegas meeting we once again gave Board time to listen to the same U.S.O.C. representative give us the same assurances of cooperation in regard to selection procedures. We were given deadlines for names to be submitted for consideration.

In October, '78, I wrote to Dr. Irving Dardic, Chairman of U.S.O.C. Sports-Medicine Committee. As instructed by the Board of Directors I strongly recommended that 75% of the names submitted by N.A.T.A. be selected because, as I explained to Dr. Dardic, the N.A.T.A. was best qualified to screen and select Athletic Trainers for the games. I also included a copy of the procedures we were going to use. I never received anything from Dr. Dardic accepting or rejecting our proposal.

I did receive a phone call from a member of the Sports-Medicine Committee and was informed that they could not accept our proposal because the U.S.O.C. did not want any one group dictating to them as to what to do.

On November 27th I received a letter from the aforementioned person stating .... “considerations of the National Athletic Trainers’ Association will be taken under advisement as from any organized group, should the N.A.T.A. care to submit recommendations for Games personnel. Selection of athletic trainers will, of course, rest with the Medical Services Committee, which has that responsibility.” Also included was a ¾ page 'criteria for selection of Games' physicians and athletic trainers' which the U.S.O.C. Sports-Medicine Committee endorsed.

In January, 1979 I learned that the selections for the 1979 Pan-Am Games had already been made. (The deadline given us for submitting names, by districts, was February 1, 1979) I telephoned the U.S.O.C. representative that had given us the dates and asked why these selections had been made without giving us, as promised, the opportunity to submit names for consideration. I was informed, point-blank, the Sports-Medicine Committee decided to go ahead with the selections. During this conversation it was suggested to me that anyone wanting to be considered for the Winter or Summer Olympics should go ahead and apply directly to the U.S.O.C. by February

Continued on page 66
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1, 1979 even though the selections for these games had been 'heavily discussed' but not confirmed.

On February 28th I placed another phone call in an attempt to find out who had been selected for the Olympic Games. I was informed the Athletic Trainers had been selected but not confirmed, consequently, the names could not be released. During the conversation I mentioned I had never received anything from Dr. Dardic and I felt his not acknowledging my October letter was a slap in the face for N.A.T.A. Your officers have been frustrated in their attempts to work with and help the U.S.O.C. Sports-Medicine Committee because:

(1) Twice we had a member of this committee come into Board meetings and assure us they wanted to work with us. So far nothing!!

(2) We were given dates to submit names and these dates were changed without informing us.

(3) One of our members received a letter stating he had not been accepted for either of the Olympic Games and that all selections had been made. A phone call by this member to a member of the Sports-Medicine Committee resulted in this member being told the Athletic Trainers had not been selected even though a letter from this U.S.O.C. representative stated the selections had been made.

(4) The N.A.T.A. did not have, as promised, any input for the recent selections.

Therefore, the N.A.T.A. Board of Directors will no longer be involved with the selection of Athletic Trainers for Olympic or International Games. This will now be totally up to the U.S.O.C. Sports-Medicine Committee and they will be responsible for any potential problems arising.

Continued on page 82
BOOK REVIEWS

The Female Athlete
by: Carl E. Klafs and M. Joan Lyon
List price: $10.95
327 pages - Illustrated
The C.V. Mosby Company
11830 Westline Industrial Drive
St. Louis, MO 63141

This publication represents the second edition of Klafs and Lyon’s popular guide to the conditioning and training of female athletes. It is not a text on sports medicine although it emphasizes conditioning as a means to prevent injury and improve performance. It is written in laymen’s terms, avoiding much of the technical jargon that unnecessarily complicates many publications. To further enhance an understanding of the material presented a glossary is included.

The text is divided into four primary parts. Part one details the historical background of women in athletics. Changing attitudes towards female sports participation and current trends in women’s athletics are highlighted. Part two deals with anthropometric and physiological factors in female sports performance. Differences in the body structure and physiological responses to exercise between men and women are clarified.

The third part of the text deals with physical conditioning. Pre-participation medical and fitness evaluations are reviewed prior to a discussion of the principles of conditioning. Weight training receives heavy emphasis in this section. One of the most valuable sections of the text is “The Conditioning Program in Action.” It presents the achievements and personal conditioning programs of a variety of world class coaches and athletes representing many different sports. This allows the reader to compare their programs with those used by champions in order to discern variations which may result in eventual upgrading or improvement.

The last major part of the book embraces a sports medicine and sports training emphasis. Care and prevention as well as strapping, emergency care, and return to competition are all reviewed. A discussion of nutrition and ergogenic aids concludes this last part.

This publication is valuable in that it recognizes the constantly expanding involvement of women in competitive athletics. Although it does not provide earth shattering revelations concerning conditioning or injury prevention, it does provide insight for the athletic trainer where women’s athletics are concerned.

Don Kaverman, A.T.C.

Athletic Training: A Study and Laboratory Guide
by: Daniel D. Arnheim and Carl E. Klafs
List Price: $8.95
282 Pages - Illustrated
The C.V. Mosby Company
11830 Westline Industrial Drive
St. Louis, MO 63141

This study guide has been published as a supplement to Klafs and Arnheim’s Modern Principles of Athletic Training text, 4th Edition. The study guide directly corresponds to the textbook’s chapters, and it contains an introduction, study questions, and laboratory exercises for each chapter. The study guide’s pages are perforated so that they may be removed and presented to the class instructor for evaluation, if so desired.

The material contained within the study guide is a simple extension of the information found within the textbook itself. It is assumed that a student is to, in theory, read the text and then complete the corresponding study questions and laboratory exercises. In reality, the student may simply copy the information from the text to the pages of the study guide. While learning by repetition may be of value in a self-study program, the average college student will simply regard it as “busywork.”

The appendix within the study guide contains some very useful information such as directions for constructing a goniometer, a step for the Harvard Step Test, a spine board, and a flexibility tester. A section listing the

Continued on page 82

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Special Pads for Special Problems

by
LORRAINE M. MICHEL, M.S., A.T.C.
Assistant Athletic Trainer
Georgetown University

Making special pads that "work" for an athlete in a particular sport can be a rewarding challenge for the athletic trainer. Pads that "work" are those which protect an injury from further aggravation, allow for maximum mobility of the body parts involved and are comfortable to the athlete during competition.

During the past few months, a couple of injuries in football and basketball dictated that a special pad be devised in order that the athlete continue participation in his respective sport. Fortunately, after some testing and minor modifications, each of the special pads "worked" and the athlete involved was able to continue through his season without missing a practice or becoming further injured.

Pad #1.
This pad was designed for a defensive end who fractured the fourth metacarpal in his left hand during the second game of the season. After the X-rays showed no displacement, our team physician Dr. Carol C. MacCartee, suggested a "gutter-like" pad which would protect the fractured bone from both sides of the hand and yet still allow full mobility of the first three fingers.

Materials Needed for Pad #1.
Orthoplast splint material, ¼" adhesive foam, 2" elasticon underwrap, 1½" zinc oxide athletic tape

Instructions to Make Pad #1.
Cut a piece of orthoplast to resemble figure #1, measuring to be sure it will protect the following areas: the fourth and fifth fingers, the fourth and fifth metacarpals on the volar surface and the third, fourth and fifth metacarpals on the dorsal surface. The splint should extend from the fourth and fifth fingertips to just distal to the ulnar styloid process. Next, keeping the fingers in a semi-flexed position, mold the orthoplast around the above areas. The contoured splint should then be covered with three layers of ¼" adhesive foam and taped securely down to the orthoplast with white athletic tape. For added protection, tape the athlete's wrist with a figure-eight and then tape the fourth and fifth fingers together. The padded splint can then be attached to the hand with 2" elasticon.

Pad #2
This pad was designed for a basketball player who ruptured the olecranon bursa in his elbow during practice. It should be noted that he also had a small laceration on his elbow which continually oozed blood and synovial fluid. Although X-rays were negative, this area was so sensitive that the athlete could not withstand the pressure of a simple hand-aid. Consequently, this injury dictated a "special" pad since the conventional elbow pad applied pressure and caused pain. The head trainer, Charles "Doug" Huffman, the athlete and myself, designed and

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Lorry was lecturer at University of Wisconsin-LaCrosse, from August to December 1976.
She received her Bachelor of Science in Physical Education from Salisbury State College in May 1975.
tested a variety of pads before finally developing the “ideal” pad which protected the elbow, allowed for freedom of movement and most importantly did not cause the athlete any pain.

Materials Needed for Pad #2.
1/2 tennis ball, mole skin (optional), underwrap, 3” elasticon
1/4” Cramer’s foam thermoplastic athletic padding.

Instructions to Make Pad #2.
Cut a tennis ball in half and cover the rough edge with a strip of mole skin. Next, cut a rectangular piece of thermoplastic foam with a hole in the middle (figure #2) just large enough for the tennis ball half to fit snug. Heat the foam padding in a 350-degree oven until it softens. then mold the foam to the athlete’s elbow which should be held in a semi-flexed position. Situate the tennis ball inside the opening of the contoured foam pad and place directly over the painful area. Attach the finished pad to the athlete’s elbow by using underwrap and elasticon.

PAD #2-A. Elbow pad with opening for the tennis ball half to fit snug.

PAD #2-B. Head trainer, Doug Huffman attaching elbow pad to G.U. basketball captain, Steve Martin.

PAD #2-C. Pad is being attached to elbow with underwrap and elasticon. Note: the fist is clenched while the tape is being applied to avoid excessive tightness around the muscle groups.

PAD #2-D. Steve Martin demonstrating the range of mobility which this elbow pad allows.

Endurance training is known to increase the physical work capacity as measured for instance by increases in maximal oxygen uptake (Vo2max). Inversely, transition from a physically active to a more sedentary life gives rise to reductions in Vo2max. Whether there is any effect of previous training, when regular vigorous exercise is resumed after an inactivity period, is a question which has been examined in only a few studies. Six young, healthy female students volunteered as subjects in the study. The subjects did not participate in any regular physical training in their leisure time and had not done so in several years. The subjects trained for two seven week periods interrupted by seven weeks in which only necessary daily activities were performed. Maximal oxygen uptake (Vo2max) was measured during work on a mechanically braked bicycle ergometer four times during each training period, i.e. before and after two, four and seven weeks of training. A two factor analysis of variance (treatments-by-subjects design) was used to test for significant differences in the data between and within training periods. The increase in Vo2max with training averaged 13.8% in period one and 9.5% in period two. The average training heart rate was the same in period one and two, 172.2 beats x min⁻¹. The improvement in Vo2max of 13.8% during the first training period is in agreement with the results from other training studies in women. The most prominent observation in the study is the similarity between period one and two regarding the influence of training upon Vo2max. Following seven weeks with no training, the Vo2max values as well as the training intensity at target heart rate did not differ significantly from the corresponding pre-training figures of period one. A commonly applied indicator for physical fitness is the work intensity at a given heart rate.

John Wells


Numerous studies have demonstrated the relationship of frequency and distance of training to increases in maximal aerobic power (Vo2 max). In the present study, the metabolic responses of young females to different frequencies and distance of high intensity interval training programs were evaluated. Thirty-two healthy, untrained female students from The Ohio State University volunteered as subjects. The subjects were given thorough medical examinations and were informed as to the possible risks involved while participating in the study. Control data were obtained by testing each subject eight weeks prior to training and again at the start of the training period. The average intensity over the eight week period was approximately 170 percent and 130 percent of Vo2 max for group S and L respectively. Each group trained on a 220 yd. (201m) indoor track. The in-
tensity of each program was gradually increased throughout the eight weeks of training. All metabolic measurements were determined by standard techniques of open circuit spirometry. Within-group comparisons were made using the student t-test for dependent observations. No significant differences were found during the eight week control period. After training, all groups improved significantly in VO\textsuperscript{2} max expressed either as liters/min or ml/kg/min. Changes in maximal heart rate following training were not statistically significant within or among groups. VO\textsuperscript{2} submax did not change significantly with training in any group. After training, no significant within or among-group differences were observed for the maximal lactate accumulated during the max VO\textsuperscript{2} test.

John Worley

“Accountability in the Weight Room” Dan Riley, Scholastic Coach, February, 1979, pp. 48, 91.

Coaches will constantly analyze their athlete's technique and will spend hours analyzing film and organizing practice, yet many of them will only casually monitor the athlete's weight training program. So, step one in any good weight program is to motivate the team to train regularly. Step two is to do everything possible to insure productivity of every exercise in every workout. There are several ways of monitoring the team's strength-training progress: (1) staff participation, (2) supervision of exercise, (3) recording workout data, and (4) de-emphasizing testing. TEST AS YOU TRAIN. For maximum gains, we require our athletes to perform between eight and twelve reps while training. Now, if we were interested in testing, we'd have them to duplicate the training effort from one test session to another. Always encourage your athletes to increase weight or perform more reps, but never at the expense of proper lifting form. Make every boy realize that developing strength is his goal, but that he is not in a contest. The only advantage of formal testing is motivation. If possible, try to find another way to motivate the athletes. Testing also has drawbacks as a motivating device. If you must test, try to stay within these guidelines. (1) Use the same methods as in your normal training session. (2) Don't allow any cheating movement. (3) Require the athletes to perform at least eight reps. (4) Select exercises involving all areas of the body. (5) Use exercises that are part of the regular training program. (6) Never compare athletes. (7) Never give rewards for the amount of weight lifted. Conclusion: Many methods can be used to increase muscle strength. What's more, they produce the intensity of effort needed to best prepare the athlete for his or her sport.

John Worley


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

Greg Vergamini


Recognizing that limb injury produces relative muscle atrophy and weakness, resulting in increased susceptibility to reinjury, the authors set out to expand on previous research which centered on isometric strength measure of muscles surrounding the site of lower extremity injury, by isokinetically determining existing relationships between an injured part and muscle groups far removed anatomically. Using a Cybex II at slow, medium, and fast speeds, five lower extremity muscle groups (quadriceps, hamstrings, hip abductors, hip adductors, hip flexors) were tested in 134 patients with various chronic injury and/or pain histories including ankle and foot problems, back pain, knee ligamentous instability, knee intraarticular defects, patellofemoral problems and degenerative arthritis of the knee. In each case, the opposite extremity was also measured and used as a control for comparison to the injured extremity. Results showed various significant and associated nonsignificant trends for specific weakness accompanying specific clinical problems. All five muscle groups showed significant weakness with at least one of the injury groups, though quadriceps weakness was the most common. The authors’ recommendations include manual and/or mechanical tests for strength imbalance of the lower extremities to be included in any physical examination.

Greg Vergamini


Attempting to investigate the mechanics of the pes anserinus and to determine its change in function after Slocum-Larson transplantation, the authors utilized anatomical and roentgenographic studies, mechanical tests on cadaver extremities, and the study of an analytical model. Results showed that flexion force of the pes under a given muscle load is greatest at 90 degrees of knee flexion, with decreasing efficiency at 60, 30, and 0 degrees of knee flexion. Similar results were demonstrated for knee internal rotational force with these changes in knee flexion, though rotational forces were increased with outward rotation of the tibia (“wind-up ef-
feet"). Adduction forces of the three pes muscles were not measurable. After transplantation, flexion forces in these positions were significantly decreased under the same loads, while rotational forces under unchanged loads showed significant increases at 30, 60, and 90, but not at zero degrees of knee flexion. The increased force available due to the “wind-up effect” was still present. Individually, the efficiency of the three muscles in performing knee flexion and tibial internal rotation were measurably changed by the procedure. Before transplantation, the semitendinosus supplied 47% of the total flexion force of the pes, but only 26% of pes rotational force (with the sartorius and gracilis supplying 34% and 40% of rotation, respectively). After transplantation, while flexion force ratios were unchanged, the semitendinosus supplied 39% of rotational force, with the sartorius and gracilis supplying 24% and 37%, in turn.

Greg Vergamini


In the mid-1960s an exercise in statistical logic was presented to demonstrate the numerous epidemiological pitfalls in judging the relative hazards in sports from fatality data. The purpose of this paper was to examine the stability of the results of an earlier study via a replication exercise a decade later. Step one. The two base populations represent the respective age groupings utilized for vital statistics from which the football candidates are considered samples. The standard 20-24 age group was discarded in favor of a more corresponding 18-22 five year age group. Interpolation from 15-19 and 20-24 groupings determined the fatality rates. Step two. Only the designated population exposed to football hazards represented the football rates. The motoring rates were represented by all males because of lack of data for participants in specific activities. “Annual” fatality rates for football are based on deaths occurring during only a portion of the calendar year. Consequently, the annual fatality rates for daily living and motoring were adjusted to be comparable to football season. Step three. Exposure to daily living was assumed to be 16 hours per day, exposure to motoring was assumed for both groups to be one hour per day for each day in the respective number of weeks. Step four. Divided hours of exposure during the football season into the corresponding seasonal mortality, fatality indications for man exposure for comparisons. In step five, by dividing one index into another the risk of football-related deaths is presented as a ratio with the risk of death to another activity by equivalent exposure. The findings indicated that in 1974 as well as 1964, football was not associated with an increase in the risk of deaths among young males. In fact fatalities in football had dropped. The actuarial question concerning football fatalities was more favorable than in the 1964 study. The calculations of the risk of death in football, however, demonstrated numerous pitfalls awaiting the unwary or zealot in judging relative hazards from fatality data. If preventive methods are to be identified and employed, they must be based on patterns adhering to all significant safety problems in sport.

David Giardina, A.T.C
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A Tip from the Field:

SUCCESSFUL TRAMPOLINE EXTRICATION

RAY BAGGETT, A.T.C.
Indiana State University

RICK MATTHEWS, A.T.C., E.M.T.
Instructor Health & Safety
Indiana State University

PETE KOEHNKE, A.T.C.
Canisius College, New York

One of the most perplexing problems that an athletic trainer can face is the management and subsequent removal of an athlete or student from the bed of a trampoline following trauma to the cervical spine. The immediate question that comes to mind is how to remove the injured person from the trampoline without causing further movement of the already injured spine. Because the bed is so elastic, any attempt to remove the victim by standard methods will prove unsuccessful in preventing movement of the head, neck and spine.

The following steps were developed in an effort to facilitate the safe removal of the injured from the trampoline. The trainer is advised that practice and preparation prior to the accident is imperative. The materials needed should be acquired and stored near the trampoline.

The materials needed are:
1. Cervical collar ("Philadelphia Type" recommended)
2. Scoop stretcher, with at least 3 straps
3. 1 roll of 3" Kling for neck immobilization on stretcher
4. Two sandbags (necessary if there is no way to strap head to stretcher)
5. Long back board (72" x 18")
6. Other patient care equipment as may be indicated
   Example: oxygen administration equipment for the management of shock
7. Equipment for stabilization of trampoline bed
   a. Two boards (2" x 12") that are of sufficient length so as to extend 1 foot past each end of the tram-
poline bed
b. Two boards (2" x 12") that are of sufficient length so as to extend 1 foot past each side of the trampoline bed
c. One sheet of plywood (4' x 8' x 3/4")

Remember, the following steps need to be practiced several times by the training staff prior to the accident!

Step 1A: Frame is constructed around patient. Trainer is then able to lay across frame and apply traction to the head and neck. Patient evaluation can now be accomplished without causing movement of the trampoline bed or the patient. Additionally, a "scoop stretcher" is being prepared.

Step 1B: At the same time as step "1A" is in process, support to the patient’s spine is being accomplished by a plywood board placed directly under the patient and trampoline bed. The board is held in place by student assistants. The people under the trampoline can support the board by using their upper back or legs as illustrated.

Step 2: While traction is maintained, the cervical collar is applied. Avoid pulling patient’s long hair if possible. Don’t rush this step.

Step 3: Collar has been applied. Traction is still maintained.

Step 4: The athletic trainer directs his four (4) assistants in placing the patient on scoop stretcher. Notice that there is no unnecessary movement of the patient.

Step 5: Patient is now on the scoop stretcher and can now be secured.

Step 6: The patient’s head and neck have been
secured to the scoop stretcher through the use of a head strap and towels (sand bag substitutes). Additionally, the patient is strapped to the stretcher to prevent unnecessary movement.

Step 7: The patient is now ready to be safely removed from the trampoline bed.

Step 8: Patient is moved to the supporting frame. The team now prepares to move her completely off the trampoline. The patient should not be lifted very high off the frame. We found it can disturb the patient. It gives an insecure feeling. Notice the assistants placed their feet on the trampoline bed. We don't recommend this unless it is necessary, but it should not cause problems since the plywood board is still in position and can support their weight if necessary.

Step 9: Notice the wrists have been secured. The team now moves her completely off the trampoline, keeping stretcher level at all times.

Step 10: The patient has now been safely removed from the trampoline and can now be transported (via Emergency Medical Services) to a medical facility.

This is only one technique. We feel the basic steps in this extrication are logical and sound. Pete Koehnke from Canisius College has recently used this technique and successfully removed a patient from a trampoline. We recommend that the team practice the routine regularly. It doesn't take very much time once you get organized to get the patient off the trampoline and to the hospital.

We wish to thank the students in our classes and special thanks to "Bud" Tice and Mike Goodwin for their suggestions while we developed this procedure.

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ATH TRAINING 0579
A Case Report:

Lower Leg Compartment Syndromes

by

RICHARD WAYNE LATIN M.S., A.T., C.

and

WILLIAM OLIVER KAUTH, Ph.D., A.T., C.

Introduction

Lower leg pain may be one of the most distressing and misunderstood of all athletic injuries. In most instances recognition of the problem is apparent, however at times it is difficult to determine. Among the causes of exercise induced leg pain are contusions to the soft tissues and bones, muscle strains, shin splints, sprains, stress fractures of the tibia and fibula, acute muscle cramps, tendinitis, and finally acute anterior or peroneal compartment syndromes. It is this last condition with which this paper will deal.

Of all the causes of lower leg pain in athletes, the anterior and peroneal compartment syndromes present one of the few true medical and possibly surgical emergencies. Without its early detection and physician referral, an athlete may be left with a permanent neurological deficit (foot drop). Not only would this eliminate the athlete from further athletic competition but result in an unnecessary handicap.

Until recently little has appeared in the sports medicine literature about the condition termed “anterior or peroneal compartment syndrome.” In a study done by Sorrell, Hinterbuchner, Green, and Kalisky (7) over a four year period a relationship between peroneal nerve injury and fractures of the femur was demonstrated. Of 26 cases reviewed only 19.2% fully recovered and 26.9% showed partial recovery.

A study by Meals (3) reported on eleven cases of individuals developing peroneal nerve paralysis after inversion sprains of the ankle. In all eleven cases reported, complete recovery occurred between six months and treatment ranging from rest to surgery.

A case report of antero-lateral compartment syndrome was presented by Garfin, Mobarak, and Owen (1). They discussed the etiology of their case as hormonally precipitated pain associated with muscle hernias and entrapment of the superficial peroneal nerve. This resulted in numbness on the dorsal surface of the fourth toe, as well as pain and hardness in the antero-lateral aspect of the involved leg.

Refetoff (6) reported on an individual with peroneal nerve entrapment caused by a hyperactive thyroid gland. Sherman and Easton (5) reported on seven individuals who developed peroneal nerve palsies while on weight reduction diets.

It may be recalled that the soft tissues of the lower leg are contained within three distinct sections or compartments. Each compartment is bound together with a heavy covering or fascia. The lateral or peroneal compartment located on the outside border of the lower leg contains the three peroneal muscles which are responsible for inverting the foot, as well as a branch of the peroneal nerve, which is one of the major neural pathways to the foot. The anterior compartment houses the tibialis anterior, extensor hallucis longus, and extensor digitorum longus muscles, whose major functions are dorsal flexion of the foot and ankle and toe extension. Also included in the anterior compartment is the anterior tibial nerve and the Tibial artery. The largest of the three compartments is the posterior compartment. Muscles in this section plantar flex the ankle, invert the foot, and flex the toes. Muscles included in this compartment are the gastrocnemius and soleus.

Within any of these compartments the “syndrome” injury can occur. The tight binding of fascia which forms the compartment does not allow for any excessive swelling within its confines. Swelling in these compartments may be caused by a number of things including excessive exercise and muscle fiber fatigue, contusion, localized infection, or overstretching of a particular muscle group. In fact, anything that causes an inflammatory response and uncontrolled swelling may result in pressure within the compartment and the subsequent condition described as a compartment syndrome.

Depending on the cause of the condition there may be a sudden or gradual onset of severe pain in the involved lower leg area. The skin over the area becomes red, warm, and may possess a stony hardness. There will be obvious swelling accompanied by point tenderness in the affected muscle group. In the later stages, numbness and the inability to dorsal flex the foot (foot drop) will develop. Again, these symptoms may present themselves in a few hours or develop more slowly over a period of days.
Regardless of how the symptoms are presented, it is important to recognize them early and to act quickly, for any delay may result in permanent neurological disability (foot drop).

It is the purpose of this paper to report a case of acute peroneal compartment syndrome in a well conditioned college football player. Hopefully, this report will provide greater insight and understanding of this condition.

Case Report
One week before the actual injury occurred, the athlete, who was involved in spring football practice, became aware of an unusual tightness and hardness in the calf of his left leg. However, the player was, at that time, on the first team and did not want to risk missing any playing time; consequently, he made no mention of this leg pain to the athletic training and/or coaching staff. He subsequently experienced a progressive worsening of the condition.

In a practice session, one week following the original onset of his initial symptoms, the athlete experienced an acute injury to the same lower left leg. The exact mechanism is not clearly understood, but it is believed that he inverted the foot while in a state of plantar flexion with his knee in extension. This occurred during a blocking drill. (Note: It is known that the athlete was not subjected to a direct blow.) Immediately, he experienced sharp pain along the lateral border of his involved lower left leg. However, the athlete's desire and dedication once again persuaded him to "stick it out" for a few more minutes until practice was scheduled to be over. By the end of practice, however, he was in too much pain to run the usual wind sprints and limped into the athletic training room, where the leg was examined by the athletic training staff, and the athlete was treated with the usual first aid treatment of ice, compression and elevation. After approximately 20 minutes of first aid treatment, he was allowed to shower and thereafter returned to his dormitory.

Approximately six hours following the injury, the entire lateral aspect of the leg was swollen, and the athlete experienced extreme tightness and severe pain; ambulation was not possible. With assistance the athlete reported to the school health center where he was referred on to the local hospital emergency room. The attending physician at the hospital administered a local anesthetic and the athlete's leg was examined and x-rayed. Twelve hours after the initial injury he was released from the hospital, given a prescription for medication to relieve his pain, instructed to rest and elevate the extremity, and to use crutches if ambulation was necessary.

The next morning the athlete talked to the team's trainer about his experience, who then referred the problem immediately to the team physician. Twenty-four hours after the initial injury the athlete was admitted to the local hospital by the team physician.

Throughout his 70 hour stay at the hospital, the leg was treated with elevation, local heat, and medication, which reduced the pain considerably. When released from the hospital he was given instructions to follow similar care at home. (Note: The athlete returned to his hometown, for the university was on one week spring vacation.) After one week of home care he started light weight bearing with the aid of crutches and experienced a mild throbbing pain. After returning to campus three weeks following the initial injury, the athlete grew discontented with the use of crutches and failed to use them. At this point he began to notice a numbing sensation in his leg and foot, causing a slight foot drop condition. One week later a pronounced
foot drop was detected. After consultation with the team physician, the trainer attempted to inervate the various muscle groups in the lower leg with muscle stimulation, but failed to obtain any dorsal flexion or eversion of the foot. Treatments of whirlpool, diathermy, and muscle stimulation were administered daily for the next two weeks. (Note: At this point a slight overall improvement was experienced.) Referral by the team physician was made to a neurologist in the athlete's hometown, since he was returning there for the summer.

The athlete's initial visit to the neurologist resulted in various tests being administered to determine the extent of the neurological deficit. The use of a leg brace was discussed as a possibility, and the neurosurgeon was not too optimistic about future athletic participation. The physician prescribed swimming and scheduled more tests including an electromyogram (EMG) to be administered upon the athlete's return in two weeks.

Three weeks following these tests a final examination was given. A marked improvement was observed. The physician commented that there would be no need to brace the foot and return to athletic competition now appeared likely. No future appointments with the neurosurgeon were deemed necessary. Straight running on flat surfaces, swimming, and active toe raises had been prescribed by the neurosurgeon. The athlete gradually added hill running, resistive toe raises, and agility running. As expected, the marked atrophy of the lower leg improved rapidly when active exercises were initiated.

The athlete returned to full participation for the fall football season and had a successful campaign. The side effects experienced as a result of the injury were limited to: (1) a slight numbness in the great toe with some inability to hyperextend, (2) an overall "weakness" in the lower leg, and (3) point tenderness in the anterior and lateral compartments of the injured leg. One year following the injury the athlete studied in this case experiences only a slight numbness in his great toe, as the only residual side effect.

Discussion

It seems clearly evident that prompt action needs to be taken in compartment syndrome injuries. Recognition of the symptoms and early treatment are a must if permanent disability is to be avoided. With any injury to the lower leg, a compartment syndrome condition should be considered a possible consequence. Early treatment should include the application of ice, elevation, and immobilization and if the symptoms become worse, immediate physician referral is a must. Again, remember the classic symptoms of severe pain, swelling, tenderness, and especially weakness or paralysis of the compartment musculature. It is the numbness, paralysis, etc., which differentiates this condition from other injuries with similar symptoms. Some authorities believe that once these neurological symptoms have presented themselves, the problem requires surgical intervention. The surgical procedure involves sectioning the entire length of the fascia, which releases the entrapped fluid and usually results in the prompt relief of pain and other symptoms. Some physicians believe that any delay in performing this fasciotomy may result in tissue death and permanent neurological deficit (drop foot).

Several other lower leg injuries may initially present symptoms similar to compartment syndrome injuries. Muscle cramps, shinsplints, contusions, tendinitis, or stress fractures that do not promptly respond to treatment should be evaluated with suspicion, and a "better safe than sorry" attitude should prevail.

Another problem to be considered in handling the compartment syndrome injury is related to the competitive nature of many athletes. When injured the athlete at times is not willing to take himself/herself out of the action, perhaps trying to "walk the injury off" or refusing treatment. Worse yet, the athlete may fail to report the injury to the trainer or coach. These situations can be most dangerous to the player, for any delay in recognition or treatment of the injury may spell the end of the athlete's sports career, either for the season or permanently. In fact, Lipscomb and Ibrahim's (2) study would seem to indicate that even when these compartment syndrome conditions are properly diagnosed and cared for, a prognosis for complete recovery remains in doubt. Only 16% of the involved cases reported obtained complete recovery after fasciotomy.

Summary

Compartment syndrome injuries are not common in occurrence. However, when the classic symptoms present themselves, the situation can easily become a true emergency.

Hopefully this case study has provided greater insight and understanding to compartment syndrome injuries. The compartment syndrome injury may or may not occur as a result of direct trauma, as many coaches and trainers seem to think. It seems entirely possible, for instance, that a case of shinsplints could develop into a serious compartment syndrome injury, given the proper circumstances.

There appears to be need for greater reporting and sharing of information concerning lower leg injuries, particularly cases of compartment syndrome conditions. Those out on the fields and in the athletic arenas need to fully appreciate the seriousness of these conditions and need to recognize the early symptoms so that permanent handicaps among today's sports participants do not occur.

Comment

One year after the injury the athlete mentioned in this study was voted by local sports writers as the Outstanding Offensive Back in the annual spring football intersquad game. There was little doubt that his recovery was complete. However, his experience may well serve as a valuable reminder in preventing similar situations from occurring.

BIBLIOGRAPHY

**The Therapeutic Recreation Information Center**

TRIC is a computer system programmed to store, retrieve, and disseminate published and unpublished material related to recreational services for the ill, disadvantaged, disabled, and aged. Designed to provide bibliographic reference materials to those interested in therapeutic recreation, the Center maintains an on-site library of information materials, and provides consultation services. TRIC is affiliated with California State University—Sacramento. For more information, write to Director, Therapeutic Recreation Information Center, School of Business and Public Administration, Department of Recreation and Park Administration, California State University, Sacramento, CA 95819

**Little League Elbow: Fact or Fiction?**

In 1960, two physicians described an X-ray abnormality of the throwing arm of three Little League pitchers. In each, a “growth center” of the upper-arm bone (humerus) was shifted out of place, presumably by the stress of pitching. Since that time there has been considerable debate both as to the exact nature of “Little League Elbow,” and the extent of the risk it poses to young baseball players.

A report in *Physician and Sportsmedicine*, by Prof. Rulon Francis of Utah’s Brigham Young University and his colleagues, details an X-ray survey of the elbows of 328 former Little League players (including 106 former pitchers) a decade later. Of these, 1.5 percent had X-ray changes suggesting damage. However, 2.8 percent of a control group (no previous baseball experience) also showed X-ray changes. The authors conclude that “participation in organized baseball as an adolescent has no enduring deleterious effect on the throwing elbow.”

This is undoubtedly not the last word on the subject.

By Dennis Aten, ATC
EASTERN ILLINOIS UNIVERSITY

**POTPOURRI**

**The Weekend Athletes**

“If you only exercise on the weekend...you’re going to die on the weekend”. This statement well capsulizes a basic thesis of a new film entitled “The Weekend Athletes”, according to Jim Bond, President, Best Films, who has recently secured the nontheatric distribution rights from ABC.

Bond added “with the explosion in sports participation in America, too many middle-aged athletes are suffering injuries due to inadequate conditioning. He said “The Weekend Athletes” examines the problem, as it travels the U.S., covering almost every sport and interviewing almost every “star-status” medical authority. Bond went on to say that “while most of the film centers around the post-college age group, the information is applicable whether the viewer is eight, 18 or 80 — whether male or female”.

Cut-away models of the human body, computers and other advanced measuring machines are used to analyze the effects of exercise on the bones, heart, muscles, tendons, as well as to suggest some solutions to the problems.

Host-narrator Jules Bergman, ABC Science Editor, adds that “you don’t play sports to get into shape...you get into shape to play sports”.

For further information write: Best Films, P.O. Box 725, Del Mar, California 92014

**Scuba Divers Beware**

The Journal of the American Medical Association reports that the most common contributing factor to serious injury among scuba divers is panic among the inexperienced. So when possible, buddy up for safety.

**Drugs**

There are more than 15,000 deaths annually from drug misuse, and an estimated 500,000 nonfatal accidents involving drugs. One of the possible reasons may be the careless, even cavalier, attitude of the public toward drugs. The public seems to regard drugs as they would a piece of hardware: a simple tool to do a simple job. Unfortunately, they are wrong, as the statistics quoted above indicate.

A drug is any foreign material introduced into the body with the intent of altering a body function or normalizing the physiological balance. Food will not be considered, although coffee and tea and certain foods exert pharmacological effects as mild stimulants.

Attitudes have been formulated in our society based on mistaken assumptions. The following is a list of premises that need to be considered as the public develops concepts regarding drug use.

Premise No. 1: The human body is not designed to take drugs. Whenever a drug is introduced into the body the defensive mechanisms immediately begin to protect the system by neutralizing or eliminating the invader.

Premise No. 2: Drugs are poison.

Premise No. 3: Drugs affect multiple systems of the body. No drug is specific for a particular target area in the body to the exclusion of any other physiological system.

Premise No. 4: Drugs frequently do not produce the same response each time they are used; i.e., they are paradoxical. There are many factors that influence the action of a drug. A patient taking the same drug on two separate occasions may not show the same response. It has been said that a person would be safer using a friend’s toothbrush than to use that same friend’s prescription drug. Some of the reasons that form the basis of this statement are obvious, such as age, sex, and weight. Other factors less obvious would include physical, chemical, physiological and psychological variations in patients. The presence of another drug—or food—may affect the action of a drug. Every drug-taking episode presents a new set of variables; again, nothing can be taken for granted.

Premise No. 5: A drug will not cause the body to do anything it cannot, of itself, do. A drug will do one of two things: it will stimulate or depress a physiological function. It cannot create a new function. There are an infinite number of examples, situations and conditions when an individual will need reinforcement or help from a drug, but only for a short period of time, until the system can re-establish its integrity. The conditions for which lifelong support is needed, such as thyroid supplement, insulin, etc., occur when the body has lost some of its normal functions and are not in conflict with the premise.

Taken from an article in May ’78 edition of “Emergency” by John Oliver, Pharmist.

**Hot Water Can Scald**

Each year, approximately 2,600 people suffer scald injuries caused by excessively hot tap water. The U.S. Con-
sumer Product Safety Commission has found that many of the burn victims fall within two age groups: under 5 years old and over 65 years old.

These two age groups are most susceptible because they are either unaware of the hazard and/or cannot react quickly to it. Injuries frequently result from children under 5 climbing unwittingly into a bathtub of scalding hot water or playing with the hot water faucet while in the bathtub. Some of the injuries suffered by adults over the age of 65 were caused by the victim slipping or falling into a tub of scalding hot water.

This information may be important to those who debride open wounds with tap water. If you use the warm water tap always test for temperature and comfort before holding a skin wound under the water for debridement purposes.

**Placebos: Not Just “In The Mind”**

Placebos, sugar pills masquerading as medicine, produce dramatic results in about one-third of patients with pain. That result usually is dismissed as a purely psychological reaction, “all in the mind.” But now a study, outlined by Dr. Jon Levine of the University of California, San Francisco, at the Second World Congress on Pain, in Montreal, shows otherwise.

In many patients, the placebo triggers the brain to release painfighting chemicals called endorphins - recently discovered natural painkillers, similar to morphine. Relief depends on one’s expectation, and to that extent it may be psychological - but the suppression of pain is real.

The study was conducted on 50 dental patients who had teeth pulled. About one-third of the subjects reported decreased pain after being injected with a placebo. But the benefits uniformly disappeared following injection of naloxone (a substance known to block the action of morphine and related drugs), indicating that the placebo had tricked the brain into producing endorphins. The injection of naloxone had no effect on those who were not helped by the placebo.

Reprint from *Readers Digest*

**EDITORIAL COMMENT**

*Continued from page 66*

from the selection of Athletic Trainers. As of now, it is not considered unethical for N.A.T.A. members to campaign or solicit for selection. Also, keep in mind there is a good chance the same people will always be selected.

**BOOK REVIEWS**

*Continued from page 67*

sources of various athletic training supplies and equipment is also included.

The study questions, laboratory exercises, and appendix are useful supplements to the original textbook. But it is not felt that they need be a separate volume from the textbook itself. If the information within the study guide is included in the next revision of the text itself, it will serve to make the text more complete and to make the information available to all of those using the text itself. Until then, the study guide may serve to be a useful supplement to the text - especially for those engaging in a self-study program.

Kathleen Heck
The Importance of Isokinetic Power and Its Specificity to Athletic Conditions

by

Alan H. Hailing, A.T.C.

and

Jeffrey N. Dooley, A.T.C.

Introduction

Athletic performance is dependent upon the immediate status or stage of development of the human neuromuscular system and its ability to adapt to specific demands placed upon it. Thus, resistive exercise protocol should parallel and/or simulate the specific functional activity at hand.

In the past, however, misconception of the terms strength and power, and their relationship to isotonic and isokinetic methods has caused difficulty in grasping specificity parameters. Too much emphasis has been placed on conventional isotonic methods and the development of absolute strength while limited research has been conducted with new isokinetic procedures and the development of power.

The purpose of this paper is to better clarify the concepts behind isotonic exercise, isokinetic exercise, strength, power, and their interrelationships, allowing implications to be made regarding most advantageous and athletic performance related exercise protocol.

Isotonic and Isokinetic

The concepts involved in the isotonic method of resistive exercise have been closely examined in the recent past by several researchers (1, 2, 3, 4, 5, 8, 9, 10, 11, 12, 14, 15). They all tend to agree that during isotonic exercise the magnitude of the weight being moved must be limited to the largest effective load that can be moved past the weakest point in the range of motion, with the speed of movement being extremely variable. Consequently, the tension demand placed on the muscle is maximum only during a small portion of any range of motion, meaning the total work done is significantly less than maximum.

Isokinetic exercise, a relatively new method of resistive exercise, attempts to utilize the advantageous concepts and eliminate the disadvantageous concepts of isotonic exercise. Thus, it has become popular opinion (1, 2, 3, 4, 5, 8, 9, 10, 11, 12, 13, 14, 15) that loading a muscle isokinetically is advantageous in that speed is kept constant, resistance is accommodating and maximal at every point in a range of motion, one concentric contraction must be followed by a reciprocal concentric contraction of the antagonistic muscle group, and the physical work which a muscle actually performs is maximized.

Strength and Power

The force output of a muscle as well as the torque (force it generates at the joint) is a function of the tension that contracting muscle can develop. This, according to Hislop and Perrine (4), is the parameter most usually referred to when the term strength is used. Strength is defined in simpler form by Wilmore (15) as the ability to apply or to resist force.

Power is simply the product of strength (force output) and speed (15). In other words, the time it takes for muscles to develop force, the rate at which muscles contract and sustain a force throughout the range of motion, and the relationship of speed to force are all facets of power.

More specifically, contractile power, which relates most closely to performance, training, and principles of muscle mechanics, is the ability to maintain the tension at velocities which are within the specificity ranges of functional activities (7).

Moffroid and Whipple (6) cite the importance of specificity of training, concluding that exercise is speed specific in the following ways: 1) Low power/absolute strength (low speed, high load) exercise produces greater increases in muscular force at all speeds of contraction at and below the training speed. In short, training for an increase in power will also bring about an increase in absolute strength.

Therefore, as can be seen, strength and power are highly related, but cannot be used interchangeably. Each has its own meaning.

Interrelationships

Both isotonic and isokinetic exercise methods can place demands on the absolute strength capacity of a muscle. Isotonically it is done by controlling the amount of resistance (heavy weight loads) and isokinetically it is done by controlling the speed of movement (slow speeds). In either case, work is performed against high resistive forces at slow speeds, which shows little relation to most athletic performance situations, merely because the majority of sporting events demand high velocities; in excess of 90 degrees/second (15).

However, isotonic exercise is limited in its ability to tax the power capacity of a muscle, because resistance is constant and speed variable. As a result, there is an inverse relationship between force and speed so that, in practice, if one is to be increased the other necessarily decreases (4).

In contrast, the isokinetic concept of resistive exercise provides the opportunity to manipulate the desired speed...
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of motion. This allows for maximal power development under training conditions which more closely approximate athletic performance.

Wilmore (15) discusses further the importance of speed in relation to muscle power development and athletic performance simulation. In isotonic exercise the relative limb speed rarely exceeds 60 degrees/second, while most functional movements in athletics require limb speeds in excess of 90 degrees/second, with some exceeding 200 degrees/second. Thus, with the advent of isokinetic equipment, which allows for training speeds of up to 270 degrees/second, specificity parameters can be manipulated and muscular power maximally developed.

**Implications for Exercise Protocol**

Before an appropriate discussion of specific exercise protocol is to take place it must be clarified here that maximal muscle power output as developed isokinetically is more specific, and thus advantageous, to athletic performance situations than is absolute muscle strength as developed either isotonically or isokinetically.

Common force/velocity relationships show that as speed of movement increases torque output decreases. Manipulation of velocity by isokinetic methods has made it quite conceivable that the speed of exercising can be progressively increased above initially slow rates in accordance with neuromuscular improvement until rates simulating functional activity have been attained.

Progressive increases of a small nature are very important in the development of power in that enough time must be given the muscle to allow full development of the contractile component (5).

In planning an isokinetic exercise protocol for maximal power development the objective should be to produce the same amount of force at increasingly faster speeds that was produced at the slower speeds. This should minimize, if not delete, the drop in the force/velocity curve (Figure 1). Instead of force output falling with an increase in speed, the force output is attempted to be kept constant as speed of motion is increased.

Because muscular power is one of the most important and specific aspects in relation to functional motion in athletics, this suggested exercise protocol should be given considerable thought by all those involved in, or associated with, muscle training procedures.

**Summary and Conclusions**

This paper has attempted to clarify misconceptions about the parameters of isotonic exercise, isokinetic exercise, strength, and power as to their specificity capabilities and interrelationships.

In this attempt the following is suggested:

1) That both isotonic and isokinetic exercise methods are capable of developing muscular strength.
2) That only isokinetic exercise is capable of developing the power capacity of a muscle.
3) That slow speed, high resistance exercise (strength) is minimally related to athletic performance situations.
4) That fast speed, low resistance exercise (power) is highly related and specific to athletic performance situations.
5) That true athletic performance situations are best simulated and specifically trained for by developing muscular power with isokinetic methods.

**BIBLIOGRAPHY**

CURRENT LITERATURE

by Ed Christman, A.T.C.
THE COLLEGE OF WILLIAM & MARY


“Athletic Training • Summer 1979

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A Tip from the Field:

The D.P. Technique for Blisters

by
Danny Poole
Western Carolina University

I believe that the first thing to do would be to go back and re-examine what a blister really is.

A blister is usually caused by some type of irritating factor. There are many types of irritants such as: friction, chafing of the skin or burns. In athletics our major concern will be friction. As a result of this friction, a separation of the epidermal layer of skin from the dermal layer of skin occurs, with tissue fluid or exudates accumulating between the two layers. These exudates may be clear, bloody or purulent. Let me note now that the covering of a blister should not be removed if at all possible, because this covering protects the underlying tissues.

Now that we have distinguished what a blister is, let us now get into the mechanics of this new method. Let it be known that I started using this method in 1972, at West Mecklenburg High School in Charlotte, North Carolina. As far as I have researched this method for taking care of blisters has never been published before. This is a very simple procedure.

The only items that you need are: (1) One small sewing needle, (2) white sewing thread, (3) scissors, (4) Betadine solution, (5) bandaids and sterile gauze pads. Fig. 1

STEP 1:
The first thing a trainer must do is make sure that the area he will be working with has been cleaned thoroughly. He must also make sure that he has cleaned himself properly. The area should first be cleaned with soap and water; then with the Betadine solution. Fig. 2 / Fig. 3

Figure 1

STEP 2:
The trainer should now sterilize the needle and white sewing thread. The best way to do this is by letting these materials soak in the Betadine solution for ten to fifteen minutes.

Figure 2

STEP 3:
After everything has been cleaned and sterilized, you are ready to start the procedure. Thread the needle with the white thread, make sure you have enough thread so there will be at least one inch of thread hanging out on
both sides of the blister when finished with the procedure.

**STEP 4:**
With the needle and thread in hand, push the needle, longitudinally, all the way through the blister. After you have the needle through the blister, pull the thread so there is at least one inch, externally, on each side of the blister. Fig. 4/Fig. 5

**STEP 5:**
Cut the needle away from the thread. Take the Betadine solution and either a gauze pad or cotton ball and saturate the thread with the Betadine solution. Then, gently pull the thread back and forth through the blister so the Betadine solution will go inside the blister so as to guard from infection. Fig. 6/Fig. 7

**STEP 6:**
The Betadine saturated thread should be left inside the blister for a minimum of 24 hours. The reasoning behind this is so the exudates may flow through the string and out of the blister. You should cover the affected area with a bandaid or sterile gauze pad, to help soak up the extra fluids that are put out through the string and to aid from infection.

**STEP 7:**
When the 24 hour period is up, you should then pull the thread out of the blister and check for any signs of infection, then paint the blistered area with some sort of skin toughening astringent. The trainer should check back with the athlete every day for signs of infection. In virtually all cases the epidermal layer of skin will not die. Fig. 8

This method has been used in countless cases since 1972 and has not failed yet. I would like to thank everyone that helped me in the use of this new method. For any additional information you can contact me at either of the following addresses:

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(704) 227-7395

ATHLETIC TRAINING • Summer 1979
Kenneth Bouch Rawlinson died at noon, March 1, 1979 at the age of 64 following a two week illness. Ken was admitted to Norman Municipal Hospital February 15 after suffering a heart attack during basketball practice.

Kenneth Rawlinson was head trainer at Oklahoma University for twenty-six years; spanning from February 1, 1953 until his untimely death. During his first years at Oklahoma, Ken was also the swimming coach, leading his teams to several Big Seven Conference titles.

Ken was born in Ford City, Pennsylvania, July 25, 1914 and graduated from Ford City High School in 1931. He received his B.A. Degree in Physical Education from Illinois University in 1936 and his M.A. in Education from Illinois in 1942. He was head trainer at William and Mary from 1942 to 1947, and Lafayette College from 1947-53. He served as president of The National Athletic Trainers Association in 1955, and was named Rockne Club trainer in 1959. His book, *Modern Athletic Training*, is considered by many to be one of the best trainers' books ever printed. In 1960, Ken attended the Olympics in Rome. He wrote many articles for the American Medical Association Journal, The Journal of Bone and Joint Surgery, The Oklahoma State Medical Journal, Athletic Journal, and Scholastic Coach. Ken lectured in many foreign countries during his summer terms. He guided fourteen Sooner teams to bowl games during his time at Oklahoma. In 1968, Ken was elected to the Helms Foundation National Trainers Hall of Fame. In 1977, Ken was awarded the Russell R. Myers Award from The Association of University of Oklahoma Professional Employees for dedication to his school, job, and community.

Those of us who were fortunate enough to have been able to have worked with Ken feel his loss as much as if we were his family. We wish to express our sympathy to Ken's wife Sally and to his son Gary, whom we love very dearly.
Ligament Ruptures Produced by Forced Inversion of Cadaver Ankles

by
KENNETH L. KNIGHT, Ph.D., ATC
Indiana State University

NOTE: This paper was presented to the 25th Annual Meeting of the American College of Sports Medicine in Washington DC, May 24-27, 1978. The assistance of Ms. Marilyn Sanford and Mr. Jim Martin of the Physical Therapy Department of the University of Missouri-Columbia (where this study was conducted) is gratefully acknowledged.

Although knee injuries are generally more severe, the sports medicine team is faced with no problem more frequently than that of the injured ankle (9). It is generally agreed that the anterior talofibular (ATF) ligament is the most commonly sprained ligament and that this injury occurs when the foot is plantar flexed and inverted (1, 4, 5, 8, 11, 16, 22, 25). No data could be found in the literature, however, to support the role of plantar flexion in this injury. This study was designed to investigate the effects of plantar flexion on ligaments torn during inversion stress of the ankle.

A sprain is defined as the rupture of some or all of the fibers of a ligament (19). The primary ligaments involved in ankle sprains are defined below. These ligaments hold four bones (calcaneous, talus, distal portion of fibula, and distal portion of the tibia) together to form the ankle joint (Figure 1).

Deltoid - fibers course from the medial malleolus (of the tibia) to the navicular, anterior aspect of the talus, calcaneous, and posterior aspects of the talus. This ligament is sometimes defined as four separate ligaments.

Anterior Tibiofibular - fibers course downward and laterally from the tibia to the fibula. This is part of the tibiofibular syndesmosis, which also includes the distal interossius and the posterior tibiofibular ligaments.

![Figure 1](image-url)

Figure 1
Ligaments most commonly involved in ankle sprains.

Dr. Knight is an associate professor and an athletic trainer at Indiana State University. He received B.S. degree from Weber State in 1969 and 1973, and a Ph.D. from the University of Missouri-Columbia in 1977. He moved to Indiana State in the fall of 1978 after serving two years as the athletic training program director and associate trainer at SUNY-Brockport. Formerly he was the head trainer at Weber State.
Anterior Talofibular - (ATF) fibers pass from the anteriolateral tip of the lateral malleolus (of the fibula) to the base of the neck of the talus on its lateral aspect.

Calcaneofibular - (CF) fibers extend downward and slightly posteriorly from the mid-lateral aspect of the lateral malleolus to the calcaneous.

Posterior Talofibular - (PTF) fibers course from the posteriolateral aspect of the lateral malleolus horizontally backward to the tubercle of the talus.

Approximately 85 percent of all ankle sprains in athletics are inversion sprains, the vast majority of which involve the ATF ligament (10, 22, 25). In the past some authors (2, 12, 20, 21, 23) felt that the most commonly damaged ligament was the tibiofibular synedemosis with tearing of the anterior tibiofibular ligament. Bronstrom (3), however, seems to have settled this question with a study of 239 patients seen during a nine month period in 1961-62. Patients were examined clinically, with arthrography, and at surgery. Sixty-four (64) percent of the patients suffered damage to the ATF ligament only, 17 percent to both the ATF and CF ligaments, for a total of 81 percent with primary ATF involvement. Only 10 percent suffered damage of the Anterior Tibiofibular. No PTF tears were reported. The remaining 9 percent was distributed between deltoid and combinations of deltoid with ATF, CF, and Anterior Tibiofibular.

The preponderance of lateral sprains over medial sprains has been thought to be due to the fact that the lateral malleolus is longer than the medial malleolus, and therefore, inversion occurs more readily than eversion (10). As a rule, however, lateral sprains are not due to pure inversion (22). Clinicians have agreed that the force usually consists of inversion, internal rotation, and plantar flexion (11, 4, 5, 8, 11, 16, 22, 25). This is thought to be due to decreased stability of the ankle when in plantar flexion (2, 5, 8, 11, 16, 22). As viewed from above, the general shape of the talus is that of a trapezoid, i.e., the anterior portion of the body is wider than the posterior portion. In dorsiflexion the wider anterior aspect of the talus supposedly wedges tightly between the two malleoli so as to prevent any lateral motion. Thus the ankle would be very stable in dorsiflexion (22). In plantar flexion, however, the wedge effect is thought to be lost (16). As the foot moves into plantar flexion the narrower part of the body of the talus would move into the ankle mortice and some lateral instability results. The small amount of free play in plantar flexion is thought to predispose the ankle to injury (5, 22).

Inman (13), however, has questioned this position. Following an extensive review of his own and others research he concluded:

"Furthermore, the widely published assertions, in clinical texts, that there is increased lateral play of the talus in plantar flexion, and the failure of investigators who have specifically studied this possibility to support such a statement, are a remarkable journalistic phenomenon. One cannot suppress the feeling that some authors have been guilty of whimsical and capricious thinking."

Inman agreed that the ankle was less stable in plantar flexion and postulated that it might be due to an increased angle between the CF and ATF ligaments in some people.

Experimental Procedures

Fourteen ankles from ten cadavers were used for this study. Previous dissection by physical and occupational therapy students had exposed all muscles and tendons of the lower leg and foot. In the majority of cases both the flexor and extensor retanaculums were gone. The joint capsules were intact. Six ankles that did not meet this criteria were rejected. Of the 14 ankles studied, seven received sprains while in dorsiflexion, five while in extreme plantar flexion (25-35°), and two while in mild plantar flexion (10-15°).
Summary of 14 Experimental Ankle Sprains in 10 Cadavers

<table>
<thead>
<tr>
<th>Plantar flexion</th>
<th>Dorsiflexion</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATF Torn</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 (ATF Only)</td>
<td>1 (ATF + CF)</td>
<td>7</td>
</tr>
<tr>
<td>Other Torn</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 (CF - Mild)</td>
<td>6 (2CF Only)</td>
<td>7</td>
</tr>
<tr>
<td>Totals</td>
<td>7</td>
<td>14</td>
</tr>
</tbody>
</table>

**key:**
- ATF - Anterior talofibular
- CF - Calcaneofibular
- PTF - Posterior talofibular

Table 1

The tendocalcaneous was incised to allow free dorsi-plantar flexion. All other muscles were loose enough that their contribution to the support of the ankle was judged to be negligible.

The lower leg was held 20-25 cm. above the malleolus with one hand; the other hand grasped the foot in the tarsal-metatarsal area. The foot was plantar flexed or dorsiflexed and then slowly inverted (Figure 2). The inversion stress was increased until a tear was heard. Pressure was relieved as quickly as possible. The ankle was then examined to determine the extent of damage to each ligament. We had no way to quantify the amount of pressure applied to the ankles, and therefore it was not measured. Force was applied until a ligament ruptured.

**Results**

A summary of the data is presented in Table 1. In six of the seven plantar flexed ankles the ATF tore: Three involved isolated ATF tears, in three others both the ATF and the CF tore. In one plantar flexed ankle an isolated CF tear was produced. The isolated CF and one of the isolated ATF tears were produced during mild plantar flexion. During dorsiflexion the ATF tore in only one case, that being an ankle in which all three lateral ligaments tore before the pressure was relieved. The ATF did not tear in six dorsiflexed ankles: and two isolated CF tears occurred. In four of the cases the bony attachments of the ligament avulsed rather than the ligament itself tearing. These were accepted as ligament tears.

Since the force required to cause a ligament to tear was not measured, no comparison could be made between the force required to tear ligaments while the ankle was in plantar and dorsiflexion. A subjective observation, however, was that more force was required while the ankle was dorsiflexed. In fact, in one ankle enough force could not be applied to tear a ligament while the ankle was dorsiflexed. After being placed in plantar flexion the ATF tore.

The data were analyzed with a chi square with Yates correction. Except in the case where all ligaments tore during dorsiflexion as an ATF tear, a chi square value of 4.57 was obtained; significant at the .05 level of confidence. It might be argued, however, that since all three ligaments tore before pressure was relieved, that the one case should be rejected. With the removal of this one piece of data, the chi square value increased to 6.41 (p .02).

**Discussion**

These data substantiate the opinions of clinicians (1,4, 5, 8, 11, 16, 22, 25) that plantar flexion is involved in the production of lateral or inversion ankle sprains. These data showed that forceful inversion of the plantar flexed ankle caused damage to the ATF ligament only, while forceful inversion of the dorsiflexed ankle caused damage to ligaments other than the ATF. Since the majority of ankle sprains involve the ATF ligament (3) it can be inferred that plantar flexion contributes to the majority of ankle sprains.

We can conclude nothing from these data, however, concerning the relationship between ankle sprains and the stability of the ankle. The data of Inman (13) seems to refute the theory that there is increased lateral play of the talus in plantar flexion as was suggested (2, 5, 8, 11, 16, 22). Further research must be conducted to establish the relationship between ankle stability and ankle sprains.

The aims and objectives of ankle taping and ankle wrapping must be examined in light of these findings. Libera (15) wrote that the intent of taping an ankle is twofold: First, to support the ligaments and tendons which prevent excessive inversion of the ankle, and secondly, to provide this support with little planar and dorsal flexion restriction, which would hinder running. O’Donoghue (22), Quigley (24), Mayhew (17), and Mayhew and Ritter (18) wrote that ankle wraps restricted lateral motion while leaving plantar and dorsiflexion unhampered. Juvenal (14) reported that elastic tape would give good support, yet be elastic enough to allow maximal plantar and dorsiflexion.

In theory, restricting inversion while allowing maximal plantar flexion is correct. These present data indicate, however, that restricting plantar flexion will reduce tears to the anterior talofibular ligament, which is the most commonly sprained ankle ligament. It would appear, therefore, that consideration must be given to restricting some plantar flexion when taping or wrapping ankles to prevent inversion sprains. Further research must be conducted to establish how much plantar flexion should be decreased.

The methods of wrapping and taping ankles presented by Davies (6) and Felder & McNeeley (7), respectively, must be questioned. They advocated applying lateral heel locks in a distal to proximal manner in an effort to promote greater eversion. However, the distal to proximal heel lock also tends to force the foot into plantar flexion, which would predispose the ankle to inversion injury rather than prevent the injury.

**Summary**

The most frequently sprained ligament in the ankle is the anterior talofibular (ATF). It has been suggested that this ligament is torn when the foot is plantar flexed and inverted, however, heretofore no experimental evidence has been presented in support of this theory. Fourteen ankles on ten cadavers were used. All muscles of the lower leg were exposed and loose enough that they contributed to support to the ankle. The tendocalcaneous was incised to allow free dorsi-plantar flexion. The joint capsule and all medial and lateral ankle ligaments were intact. At random ankles were placed either in dorsiflexion or plantar flexion and forcefully inverted until a tear was heard. The ankles then were inspected to determine the site of the damage. In six of seven plantar flexed ankles the ATF tore. The ATF tore in only one of the seven dorsiflexed ankles. (In this ankle all lateral ligaments tore before the pressure was released.) A Chi Square with Yates correction was significant (p .05). These data confirm the theory that both plantar flexion and inversion are required to tear the ATF ligament. Also, these data suggest that consideration be given to preventing some plantar flexion when taping the ankle as a protection against lateral ankle sprains.

ATHEletic Training • Summer 1979
Attention
Certified Athletic Trainers!

The Professional Education Committee is making available to the membership of the National Athletic Trainers Association the Proceedings of its Professional Preparation Conference entitled "Basic Athletic Training Education" held in Nashville, Tennessee on January 7-8, 1978 prior to opening sales to all persons concerned with the prevention and care of athletic injuries. Since this publication is designed to communicate important principles concerned with the prevention and care of athletic trainers, those certified athletic trainers purchasing this text will automatically be awarded O.I.C.E.U.'s.

The range of the material presented in this publication will appeal to all readers interested in athletic injuries and the field of athletic training. The thirteen articles appearing in this proceedings were presented at the aforementioned conference by the following leading American sports medicine specialists and athletic trainers:

The Role of the Athletic Trainer in Sports Medicine - Present and Future ........... Marcus Stewart, M.D.
Muscle Physiology - Speed and Strength Training, An Update ....................... David Costill, Ph.D.
Neurological Evaluation .......... Joseph Maroon, M.D.
Endurance Training - An Update on the Basics ....................... David Costill, Ph.D.
Gynecology for the Athletic Trainer .. Karl Giulian
New Careers for the Athletic Trainer .......... Al Proctor, A.T.,C.
Medical and Legal Ethics and Responsibilities for Athletic Trainers .......... Phil Callcut, A.T.,C.
Protective Equipment and Its Fit ................. Dick Malarea, A.T.,C.
Orthopedic Evaluations - Lower Extremities ............. Arthur Ellison, M.D.
Three Years of NAIRS .......... John Powell, A.T.,C
New Methods for Pain Management .......... Larry Gardner, A.T.,C.
Orthopedic Evaluation - Upper Extremities and Trunk .......... Arthur Ellison, M.D.
Tissue Healing and Repair - An Update .......... Alexander Kalenak, M.D.

To purchase these proceedings, send $10.00 in cash or check to "Proceedings", 11 White Building, Penn State University, University Park, Pennsylvania 16802. If submitting payment by check, please make it payable to NATA Professional Education Committee. This is your last chance to purchase this publication before it is made available to other persons interested in the prevention and care of athletic injuries. Don't miss out! 1977 Proceedings sold out in less than six months after its first printing.

Bibliography


ATHLETIC TRAINING • Summer 1979
ANNOUNCEMENTS

Henry Schmidt Honored

District 8, Northern California section, is proud to acknowledge that retired trainers are not forgotten.

At the recent 54th Annual East-West Football Game and Pageant, Henry Schmidt, University of Santa Clara, retired, was honored at halftime with the Orin “Babe” Hollingberry award. This award was first presented to former President of the United States Gerald R. Ford, in 1974.

Henry is the first non-player recipient for his thirty years of dedicated service as head trainer for the East squad.

Henry Schmidt, Athletic Trainer at the University of Santa Clara in 1930.

Correction

In the Winter 1978 issue of Athletic Training, under “Index-Volume Thirteen,” two separate articles were erroneously listed together. They should have read: WALKER, B. and MUENCHEN, J. Policies and Procedures Are Necessary in the Training Room, 211 (Winter); SLOCUM, P. Procedure Manual: A Management Concept, 212 (Winter). Please note this change.

Statement of Information

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

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

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

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

1978 Proceedings
Still Available

The Proceedings of the 1978 Professional Preparation Conference, which was held at the Opryland Hotel, Nashville, Tennessee, on January 6-8, 1978, is available for $10.00. Continuing Education Units (0.5CEU) are available for purchasing this manual. Checks should be made to “N.A.T.A. Professional Education Committee” and sent to:

Sayers “Bud” Miller
131 White Building
Pennsylvania State University
University Park, PA 16802
(814) 865-9593

Certification Information

The schedule of upcoming N.A.T.A. Certification Examination sites and dates for 1979-80 is as follows:

January 20, 1980 - Regional
New York area (E.A.T.A.)  Palo Alto, CA
Valparaiso, IN  Eugene, OR
Fort Worth, TX  Tampa (tentative)
Nashville, TN  (all sites subject to change)
Deadline for requesting application - Oct. 15, 1979
Deadline for returning application - Dec. 1, 1980

March 16, 1980 - Regional
District 5 Meeting (site and time to be announced)
Tucson, AZ  West Chester, PA
Raleigh, NC  Ann Arbor, MI
Pullman, WA
Odessa, TX
Deadline for requesting applications - Dec. 15, 1979
Deadline for returning applications - Feb. 1, 1980

Contact:
Rod Moore ATC
Athletic Dept.
Valparaiso University
Valparaiso, Indiana 46383

Continued on next page
### Continuing Education

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

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

Many of you have raised questions concerning CEU, many of them valid. Keep two things in mind: (1) re-read the initial information and some of your questions will be answered and (2) this is our initial endeavor and we are aware that at the conclusion of the initial three-year period review and revision will be necessary.

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

Thank you,
Jack Redgren
NATA Sub-Committee
Continuing Education

### A Timely Reminder...

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

### Brochure Requests

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

### GUIDE TO CONTRIBUTORS

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

1. One original and five copies of the manuscript should be forwarded to the editor and each page typewritten on one side of 8½ x 11 inch plain paper, double spaced with one inch margins.

2. The first page of the manuscript should include title of paper, full name of author(s), academic degrees, name of the department and institution of author(s).

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

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

5. Photographs should be glossy black and white prints unless color is absolutely necessary to indicate detail. Graphs, charts, and figures should be of good quality and clearly presented on white paper with black ink, in a form which will be legible if reduced for publication. Legends to illustrations should be typed separate from the illustrations on a page following the last illustration. Copies of all illustrations should accompany each of the five copies of the manuscript.

6. References should be typewritten (double spaced) beginning on the first page following the manuscript. They must be alphabetized and numbered consecutively. Citations in the text of the manuscript should take the form of a number in parenthesis (7) directly after the name of the author being cited, or after the reference if the author's name is not used. The style of the references is that of Index Medicus. Examples of references to a journal, book, chapter in an edited book, and presentation at a meeting are illustrated below:

    5. Potential authors are referred to reference 1 above, for help in preparing their manuscripts.
    6. Unused manuscripts will be returned, when accompanied by a stamped, self-addressed envelope.
    7. Manuscripts not following the preceding procedures will be returned to the author.

Address all manuscripts to:

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Department of Athletics
Michigan State University
East Lansing, Michigan 48824

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Treatment of Pain in Athletes
By the Use of Transcutaneous Nerve Stimulation

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Pain
Throughout history the word "pain" has attained a plethora of meanings. For example, two thousand years ago Aristotle described pain as "passion of the soul". Philosophers of the Middle Ages thought of it in the theological terms, either as a test of spiritual strength or as punishment of sin. "The Son of God suffered unto the death, not that men might not suffer, but that their suffering might be like His". (1) Neurology professors of a generation ago taught their students that there were four kinds of pain: pricking, aching, clear pain, quick pain. By the 1970's their successors could name more than 100 different types of pain.

Interest in an in-depth examination of pain has reached such new heights that a new word has been coined to describe the study of pain: dolorology.

Pain, however, is an obviously needed function of the body. It warns us of injury and disease. Without pain, the body would not know of any harm being done to itself. Biologically, pain is a protective mechanism; physiologically, it is a sensory signal which can be monitored to some extent; and psychologically, pain is an unpleasant sensation.

When one speaks of physical sensations, pain is perhaps one of the most complex, ranging from the slight twinge of an earache to the acute pulsating sensation of tic douloureux, a nerve disease of the face affecting older people. "Despite our amazing technology," says Dr. S. Freese, "we have yet to attain the stage of knowledge and understanding of pain that the Wright Brothers had of powered flight when they first flew. We find new ways to relieve pain, but we still don't understand how we hurt or why". (2)

In the field of sport, pain is a sensation with which many athletes are familiar. Very few athletes traverse and entire season without being subjected to some type of injury. An athlete competing in interscholastic, intercollegiate, or professional sport (5) must at many times play with pain. "The pain threshold", says Dr. Robert Kerland, "is high among superstars or high-level athletes. I don't know if these athletes can accept more, but they definitely don't feel pain as much. Whether this is acceptance, or the way they're put together, we don't know. I think it has a lot to do with the way an athlete is put together. You have to have a high pain threshold to play football, hockey, and definitely for boxing". (3)

One can easily initiate an argument over whether an athlete should or should not play with an existing injury which could be compounded, possibly causing detrimental damage. But the present monetary conditions of professional and, in some big-time collegiate teams — not to mention our own societal attitudes toward victory — dictate that a player be available for competition.

There are times, though, when pain is neither necessary nor useful. Such times are when pain disrupts thinking and consciousness, and when pain is long-termed. (4) There are also times when pain limits exercise and joint mobility thereby inhibiting rehabilitation. (5) Furthermore, there are times when pain is present, but the condition causing it is not severe enough to demand limitations of activities. (6)

Acute Versus Chronic Pain
There are two major types of pain — Acute and Chronic. Both types of pain are treated differently. Unfortunately, there are too many doctors who try to treat chronic pain as acute pain and get their patient into trouble. (7) The following are the differences between acute and chronic pain. (4)

**ACUTE**
1. Pain is a symptom
2. Pain is useful
3. Anxiety, high heart rate, and blood pressure are increased
4. Narcotics generally useful
5. Little addiction
6. Pathology generally recognized
7. Cure and relief is likely

**CHRONIC**
1. Pain is a disease
2. Pain is biologically not useful
3. Depression
4. Narcotics are contraindicated
5. Addictive
6. Pathology is a complex interaction of the physical and psychological
7. Cure and relief is not likely

From the preceding, it is obvious that there are major differences between acute and chronic pain. Therefore, their management must not be one and the same. When dealing with a patient in pain, the type of pain must be identified. At that point, the method of treatment and the therapeutic plan may be considered and administered properly.

As noted, treatment of chronic pain as acute pain may be detrimental to the patient, but the reverse is also true. Improper handling and treatment of an acute injury may develop into a chronic pain. (8)
Chronic pain is generally more involved than acute pain, and is less well-known and understood. Nonetheless, what is understood is that it is necessary to have proper management of the acute injury to prevent it from becoming a chronic injury accompanied by chronic pain. There are many modalities, both old and new, that a trainer can choose between.

Pain Control
With the care, treatment, and rehabilitation of athletic injuries, the athletic trainer attempts to relieve pain. Drugs, of course, play an important role in the treatment of pain. Morphine, derived from the opium poppy, was discovered in 1806 and named after Morpheus, the Greek god of dreams. Almost two centuries later, despite all its drawbacks, it still remains one of our most effective analgesics.

There are many benefits to be gained from the use of drugs, but continual use of even the mildest drugs can cause detrimental side effects. With more potent drugs, addiction is always a possibility.

Cryotherapy, the use of cold, has for many years been a method of trainers for treating pain. Its easy accessibility and minimal cost make it very worthwhile. Also, its potentially harmful effects on the body are very slight.

Thermotherapy, use of heat, is also an inexpensive and safe way of treating pain. Heat increases the exchange of oxygen and blood in areas where an injury has taken place. The trainer is, of course, cognizant of the fact that heat during the acute stages of injury is contraindicated.

Ultrasound and diathermy can also be used by the trainer to treat pain, more specifically, muscle pain.

Factors Influencing Pain Behavior
It has long been recognized that the interpretation, sensation, and the amount of dysfunction due to pain varies from one individual to another. A similar stimulus given to two different people may elicit two totally different reactions, and they may interpret the pain differently. There are also times when a similar stimulus, given to the same person at two separate times, may result in different reactions and interpretations. Such is the example of the athlete who may be injured in competition, but may not feel the pain until afterwards. But given the same injury in another situation, the immediate response may be much different.

These are five influencing factors to be considered in pain behavior(4):

1. The State of Involvement of the Injury and the Probabilities of the Outcome. The degree of actual injury and the extent of damage which may result is a determining factor of the pain behavior.
2. Ethnic and Cultural Influence. It is known that certain societies experience more pain than others.
3. Past Experience. Knowing what the pain is like from previous experience will influence response.
4. Secondary Gain. For some people there may be secondary gain to their behavior of pain. Such examples are of money and sympathy from other people.
5. Psychological Makeup. There are times when a person may psychologically feel more pain than others, or the same person may feel more pain from time to time.

These five factors, clearly showing that there is a wide variety in perception of pain, have led researchers to suspect that there are mechanisms in the body as well as the mind that alleviate pain or, conversely, make pain worse—and that operate totally without regard to the specific source of pain(7).

In an attempt to understand the mechanism of pain

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three theories have been suggested. The Specificity Theory that there is a fixed, direct-line communication system from the skin to the brain. (21) The Pattern Theory suggests that the nerve impulse pattern for pain is produced by intense stimulation of non-specific receptors. (21) The Gate Control Theory proposes a mechanism at the spinal level which affects the perception of pain by the comparative activity of large-diameter A-fibers and specific pain C-fibers in cutaneous afferent nerves. (9) All of these theories are questioned, in part, by some clinical observations. (21)

The Specificity Theory
This theory holds that the sensation of pain is the result of specific peripheral nerve excitation. The pain impulse is then transmitted in a manner similar to touch, cold, and warmth. Free nerve endings have been considered the most probable pain “end organ”. Once stimulated, the free nerve endings transmit the impulses by the A-delta and C-fibers in peripheral nerves, and the lateral spinothalamic tract in the spinal cord to the thalamus at the base on findings that different sensations from an area such as the cornea of the eye can be appreciated, while end organs usually identified with cold and heat are not visible microscopically. Also, calling a nerve receptor a “pain receptor” implies that stimulation of one type of receptor elicits a single physiological or psychological response. This has not been borne out clinically or physiologically since, for example, the theory does not explain why pain persists after nerve tracts have been destroyed. (21)

The Pattern Theory
This theory suggests that the intensity of the stimulus evokes a specific “pattern” and is subsequently interpreted by the brain as pain. The theory proposes the existence of a rapidly conducting fiber system which inhibits synaptic transmission in a more slowly conducting fiber system that carries the signal for pain. Under pathological conditions the slow conducting system established dominance over the fast with slow, diffuse burning pain as the result. This could explain how extremes of heat and cold evoke painful responses. The end result is not the stimulation of a specific end organ, but the result of intensity and frequency of stimulation of a non-specific end organ. The theory has been challenged partly because it is too general and does not explain the physiological evidence that a high degree of receptor-fiber specialization occurs. (21)

The Gate Theory of Pain
According to Roth (9) the Gate Theory of pain was developed by Ronald Melzack and Patrick Wall in 1965. They proposed that there are two types of pain: 1) Touch, or prick, pain which is transmitted by large, fast A-fibers, and 2) Burning pain which is transmitted by small, slow C-fibers.

The touch pain is short and non-lasting while the burning is long lasting. The following is a schematic diagram of the Gate Theory (Figure 1). (4)

In this diagram the T-cell is the Transmission cell which will elicit pain to the brain and the substantia gelatinosa is the “gate”. If the large fibers are stimulated (by a light stimulus) it is believed that pain will be felt at first because of the one synapse to the T-cell, but at the same time the substantia gelatinosa is stimulated which will “close” the gate and inhibit transmission. Therefore the pain will start and stop quickly.

If the small fibers are stimulated there is no inhibition of the substantia gelatinosa, which means the gate is “open”, and there is a direct stimulation of the T-cell. This is what happens when a strong stimulus is applied.

The gate can also be controlled by the higher centers of the central nervous system, mainly due to the factors that influence pain behavior. Although this is still not clearly understood, it is believed that the mind will somehow control the gate from its end.

If the gate is open due to a strong stimulus, it is believed that the gate can still have a chance to be closed down again. In other words, it is believed that if both the large, fast fibers, and the slow, small fibers are simultaneously stimulated, the quicker traveling impulse of the large nerve cells will close down the gate thereby stopping the transmission of pain. This theory of the gate has led to the use of Transcutaneous Nerve Stimulation (TNS) devices.

Electrical Stimulation
The use of electrical stimulation to relieve pain is not new. In fact, electrical stimulation as a force or name was not described until 1600. Nonetheless the ancients recognized that the electric eel or torpedo gave

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**Figure 1**
forth an energy which relieved pain. Electrical stimulation was also known in time of Galen but subsequently forgotten or discarded.(2)

So the use of electrical stimulation is not a recent breakthrough — merely a revival. The Gate Theory, though being challenged, has led to the revival of electrical stimulation and TNS.(2)

Researchers led by Dr. Candance Pert and Dr. Solomon Snyder of the National Institute of Mental Health, found that some animal brain cells had distinctive areas to which opiates drugs, such as morphine, would fit perfectly, just as a key would fit into a lock. These opiate receptors were later found to also exist in human brains. The initial question the research team asked was "why should the brains of humans and animals have evolved with 'locks', whose only keys were drugs that many would later invent?"(11)

In 1975, Dr. John Hughes and Dr. Hans W. Kosterlitz of the University of Aberdeen in Scotland discovered that the human body produced its own chemicals to fit these opiate receptors. These chemicals were named enkephalin, a Greek word meaning head. They are believed to be produced and to act specifically in the brain. Their chemical composition consists of five amino acids.

At a later date, another similar substance was also discovered. These substances have been named endorphines, meaning "the morphine within".

Researchers are now asking a variety of questions. For example, "perhaps the stoic who withstands torture is simply a person endowed genetically with unusually copious production of natural pain killers. Perhaps the person susceptible to drug addiction is one born with a natural deficit of the chemicals."(11) Doctors also believe there exists a link between mood, emotions, and behavior and the presence or lack of endorphines or enkephalins.

With the discovery of these chemicals, physicians are surmising that if the body produces its own pain killers then of course they should not be addicting or cause harmful side effects the way our present manmade opiate pain killers do. But drug manufacturers have been attempting to synthetically emulate these chemicals and so far have only produced a substance which presently is even more addictive than morphine. But physicians and drug manufacturers are getting close. According to Dr. Harold Carron, head of the University of Virginia Pain Clinic, within five years, researchers should be able to produce a synthetic pain killer which will parody our own endorphines and enkephalins.(12)

The theory behind TNS is that its mild, electrical currents stimulate the large, fast nerve fibers to "close the gate" and inhibit pain.(2) There has also been recent evidence that neurostimulators may induce the nervous system to release an endogenous morphine equivalent, enkephalin.(10) Unfortunately, synthetic enkephalin is as addictive as morphine, therefore it is no miracle drug.(4,7) Nevertheless, the level of enkephalin in different people is thought to be a factor in the wide variety of pain discrimination.(4) The lack of enkephalin is believed to be the reason why some people are extraordinarily sensitive to pain.(7)

Transcutaneous Electrical Nerve Stimulation

A TNS unit is a small battery-operated compact that produces a low intensity electrical current. This current is transmitted through cables to electrodes. The electrodes are placed on the skin and the current is passed through the pads by way of the skin. A slight tingling or buzzing sensation may be felt. Several models now have two channels which means there are four cables leaving the unit. Each channel may be controlled separately. Most of the modules have control for intensity, duration, and width of the current. The electrodes are usually held in place by straps or adhesives. A conductive gel is used between electrode and skin. More recently, there has been the production of gel-less electrodes that adhere to the body by themselves. The cost of a unit is usually $300 or more.

TNS Research

In all research reviewed by the authors, TNS has been judged to be of significant value in the relief of pain. Shealy reported on the use of TNS in 750 patients treated.(5) Patients with acute pain (including surgical wounds, fractures, sprains, etc.) achieved eighty per cent excellent control and still another sixty per cent of patients with chronic pain had partial but adequate relief. Loesser et al. reported sixty-eight per cent of their patients with significant relief, and only thirty-two per cent with no significant relief.(13) Cooperman et al. and VanderArk et al. similarly showed seventy-seven per cent of their patients to have significant relief.(14,15) Long showed twenty-five to thirty per cent relief as a long-term therapy.(16) Melzack has shown seventy-five per cent relief from phantom limb pain, and sixty per cent relief from low back pain.(17) Banerjee reported that in five spinal injury patients, all five reported significant relief of pain through TNS.(18) Steig reported that with acute and chronic pain patients, combined results were fair to excellent relief eighty-three per cent.

Duration of Relief

Though there is no explanation as yet, there have been reports of pain relief after stimulation from TNS. Burton reports that often there is a period of sustained relief (minutes to hours) following stimulus.(10) Johnson also reported that relief can continue afterwards.(2) Melzack showed that duration of relief infrequently outlasted the period of stimulation by several hours and occasionally for days or weeks.(20) Loesser et al. reported that thirteen per cent received per cent relief as a long-term relief from stimulation.(21) From this it can be seen that the duration of relief may far surpass the duration of stimulation. Empirical experience by the present authors indicates better results with suggestive athletes. For this reason, prior to treatment it is necessary to explain to the athlete that TNS has electrical energy that has been effective in many types of pain; that several treatments may be necessary to determine the position of electrode placement that will result in maximum pain relief. Explained also is that the athlete's active participation and cooperation are important for the success of the treatment, and that, for some, relief may result from a twenty minute treatment and others may need to wear it 24 hours a day.

There is not enough research to

It has also been shown that TNS will relieve postoperative pain. This has been specifically shown by VanderArk, Cooperman, et al., Hymes et al., and Shealy. It is reasonable to assume, however, that if significant results can be obtained with the acute and chronic pain, then pain due to postoperative surgery will also be relieved because it does fall in the acute type pain. This relief of pain may not only reduce the agony after operation, but may facilitate ambulation and rehabilitation that was limited only because of pain.

Contraindications

To date, there have been no deaths or serious complications reported. Only skin reactions of 1.6% incidence of cosmetic reaction have been reported.(10) Shealy reported that in 2000 patients, with maximum tolerable voltage to every part of the body, there was no evidence of cardiac dysrhythmia.(20)

According to Roth the contraindications are: (9)

1. Pacemaker. Allowed as long as current does not pass through the heart.
2. Pregnant Women. There is not enough research to date.
3. Cancer. May stimulate more growth of the cancer cells. May use only if patient has a short time to live.
4. Do not use if pain interferes with pathology.
5. Acute Rheumatoid Arthritis Attack. The patient will need feedback.
6. Do not use stimulus if it is more uncomfortable than the pain itself.
7. Another contraindication is of placement of electrode over carotid sinuses in order to avoid vagovagal reflexes.

The Use of TNS in Athletics
To date in a preliminary report on the use of TNS in sports medicine, it has been suggested that there are occasions when pain is present, but the condition causing it is not severe enough to demand limitation of activities.(22) This is very important to the college, professional, or world-class athlete who must participate when only pain and not injury is hindering his performance.

One author experimented with TNS using 31 athletes for whom a carefully documented method of use and response were recorded.(6) Seventy-two other athletes were used but with incomplete documentation, for a total of one hundred and three patients. No athlete with serious injury or potential disabling conditions was included in this study. The report showed that all of the patients demonstrated a positive response to the treatment. This varied from mild pain relief during treatment to dramatic cures.

The following is a list of the conditions that were reported being used by TNS in the above sports medicine program(6) although they believe there could be more: 1) hip pointer; 2) elbow epicondylitis - medial or lateral; 3) mild knee ligament sprains — medial or lateral; 4) acromioclavicular sprains; 5) shoulder contusions (poin-
ters) and trapezius insertion strains; 7) low back strains and contusions; 8) "jumper's knee" - tendonitis of quadriceps tendon or patellar ligament; 9) cervical muscle strain; 10) tendonitis about the leg and foot; 11) acute bicipital tendonitis; 12) rib contusions, mild costochondral separations; 13) mild shoulder rotator cuff sprains. The authors have found TNS useful to relieve acute pain during rehabilitation exercises.

Conclusion
TNS has a place in sports medicine as a therapeutic modality. It may facilitate the treatment of an injury, thus enhancing rehabilitation in order to return an athlete to practice. As the research has shown TNS to be useful in the relief of pain for non-athletes, then it is reasonable to assume that it can be of value in sports medicine.

Despite the rather primitive and empirical nature of TNS devices, they are worthy of serious consideration by the practicing physician and athletic trainer today and are likely to be of even greater clinical value in the near future.(10) Research has clearly shown TNS to be worthy of this consideration. Benson et al. have reported that even the placebo effect on TNS is considered to be a real phenomenon and unquestionably of some clinical value.(23) Shealy believes that TNS should be in every emergency room and in the near future it will become a common picture in the operating room.(5) He also states that they are safer than aspirin and should generally be used before any drugs are tried.(5)

The Gate Theory of pain has led to TNS, although the Gate Theory is presently being challenged. Nonetheless, even though TNS is only theoretically explainable, it does work. More experimentation is needed, especially in the field of sports medicine, in order to further our knowledge. The more we can learn about the facts of pain, the more we can attempt to treat pain patients.

Bibliography

FUNCTIONS AND RESPONSIBILITIES:

Section 1: Selection: Elected by majority popular vote of Certified NATA membership. Board of Directors serves as the nominating committee. The Board will nominate two candidates with biographies of the two candidates published in Athletic Training: The Journal of the National Athletic Trainers' Association in the first issue after the winter meeting of the Board of Directors prior to the popular vote. Candidates must have served as a member of the Board of Directors at some time during the four years immediately preceding beginning date of term of office.

Section 2: Term of Office: Two years. May not serve more than two consecutive terms.

Section 3: Functions and Responsibilities:

1. Serves as the official spokesman for the Board of Directors and the Association concerning public relations and speaking engagements for the membership.
2. Maintains communications with the Executive Director in all matters pertaining to the coordination, management and supervision of the Association's affairs.
3. Calls all meetings of the Board of Directors as deemed necessary and advisable.
4. Presides over all meetings of the Board of Directors.
5. Presides over all National Business meetings.
6. Represents a tie-breaking vote on the Board of Directors and votes only in the event of impasse.
7. Keeps the Board of Directors informed about Association affairs between Board meetings.
8. This is a non-paying position; however, all traveling expenses are paid by the NATA.
9. Serves as an ex-officio member of all Association committees.
10. Appoints with agreement of Executive Director and with the approval of the Board of Directors, representatives of NATA to allied organizations.
11. Acts as an auditing committee for NATA financial affairs and approves financial statement of Executive Director.

ARTICLE III

BOARD OF DIRECTORS

Section 1: Selection: Elected representatives of the ten (10) NATA Districts plus a president elected by popular vote of the Certified membership. Each representative must be a Certified member of the Association.

Section 2: District Geographic Areas:

District 1: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont, Quebec, New Brunswick, Nova Scotia
District 2: Delaware, New Jersey, New York, Pennsylvania
District 3: Maryland, North Carolina, South Carolina, Virginia, West Virginia, District of Columbia
District 4: Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin, Manitoba, Ontario
District 5: Iowa, Kansas, Missouri, Nebraska, North Dakota, Oklahoma, South Dakota, University of Colorado
District 6: Arkansas, Texas
District 7: Arizona, Colorado, New Mexico, Utah, Wyoming
District 8: California, Nevada, Hawaii
District 9: Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, Tennessee

Section 3: Terms of Office: Three (3) years for elected representatives to the board.

Districts 1, 4, 7: 1971 and every third year thereafter
Districts 2, 5, 8: 1972 and every third year thereafter
Districts 3, 6, 9, 10: 1973 and every third year thereafter

Section 4: Functions and Responsibilities:

1. Meets at the National Convention and at any other time during the year the president determines it necessary to call a board meeting.
2. Serves as the official legislative body of the Association.
3. Approves appointment of all committee chairmen and standing committee members.
4. Approves the appointment of all special committees deemed necessary for the conduction of special Association projects of study.
5. Appoints all executive officers of the Association.
6. Serves as the nominating committee for the position of President, of the Board of Directors. Will nominate two candidates with biographies of the candidates published in Athletic Training: Journal of the National Athletic Trainers Association prior to the popular vote.
7. Continually evaluates and defines the roles and functions of all Association officers, standing committees and special committees.
8. Receives recommendations, suggestions and requests from Association districts and makes recommendations to the President for their inclusion in the agenda of the Board of Director's meetings.
9. Continually re-evaluates the goals and objectives of the Association and accepts primary responsibility for progress toward these goals.
10. Meets in a private session at the annual NATA convention for the purpose of reviewing personal performances and appointing persons to all positions open or deemed necessary. A majority vote of the board is necessary to terminate the office of an appointed person; this will be done by secret vote and counted by the president and one other board member.
11. Receives and acts on recommendations of the Ethics Committee in regard to matters of unethical conduct. Notifies the accused person of charges pending and advises him of his right to appear before the board prior to board action on the charges. The decision of the Board of Directors in Code of Ethics matters is final, except that if the decision is to initiate cancellation of membership such cancellation shall be done as prescribed in ARTICLE VI., Sections 1 and 2 of the Constitution.
12. Approves recommendations of Board of Certification for certificate of candidates.
13. Acts as an auditing committee for NATA financial affairs and approves financial statement of Executive Director.
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ARTICLE VIII
ADVISORY COMMITTEE
Section 1
Selection of Chairman: Appointed by the President with agreement of Executive Director and approval of Board of Directors from the Certified membership of the Association.
Section 2
Term of Office: Two years and may be reappointed with approval of Board of Directors.
Section 3
Committee Members: The number of committee members will be determined by the President and Executive Director.
Section 4
Selection of Committee Members: Appointed by the President with agreement of Executive Director and approval of Board of Directors.
Term of Office: Two years and may be reappointed.
Section 5
Term of Office: Two years and may be reappointed.
Functions and Responsibilities:
1. To advise the President and Executive Director, at their request, on matters needing specific information in the respective specialty fields of the committee members.

ARTICLE IX
AUDIO-VISUAL AIDS COMMITTEE
Section 1
Selection of Chairman: Appointed by the President with agreement of Executive Director and approval of the Board of Directors from the Certified membership of the Association.
Section 2
Term of Office: Two years and may be reappointed with approval of the Board of Directors.
Section 3
Committee Members: The number of committee members will be determined by the committee Chairman to form a workable group.
Section 4
Selection of Committee Members: Recommended by the Chairman and appointed by the President with the approval of the Board of Directors from the Certified membership of the Association.
Section 5
Term of Office: Two years and may be reappointed.
Section 6
Functions and Responsibilities:
1. Maintains a bibliography and sources of audio-visual aids available to Association members.
2. Cooperates with individuals, manufacturers, companies, etc. as advisor in audio-visual projects.
3. Investigates and recommends to Board of Directors the advisability of sponsorship, co-sponsorship, authorship, etc. of audio-visual aids. The Committee is given authority to approve audio-visual projects for further development, but not to give final approval.
4. Coordinates and supervises all Board approved audio-visual aid projects.
5. Establishment of and maintenance of an audio-visual aid loan library for the members of the Committee.
6. Cooperates with all standing committees in audio-visual aids relative to their findings and needs.
7. Cooperates with President in development of audio-visual aids for his use as the official spokesman for the Board of the membership concerning public relations.

ARTICLE X
CAREER INFORMATION AND SERVICES COMMITTEE
Section 1
Selection of Chairman: Appointed by the President with agreement of the Executive Director and approval of the Board of Directors from the Certified membership of the Association.
Section 2
Term of Office: Two years and may be reappointed by the Board of Directors.
Section 3
Committee Members: The number of committee members will be determined by the committee Chairman to form a workable group.
Section 4
Selection of Committee Members: Recommended by the Chairman and appointed by the President with the approval of the Board of Directors from the Certified membership of the Association.
Section 5
Term of Office: Two years and may be reappointed.
Section 6
Functions and Responsibilities:
1. Receives and reviews all applications for certification.
2. Coordinates and supervises the administration and grading of all certification examinations.
3. Ascertains the fulfillment of Certification requirements and makes recommendations to the Board of Directors for final approval.

ARTICLE XI
CERTIFICATION COMMITTEE
Section 1
Selection of Chairman: Appointed by the President with agreement of Executive Director and approval of the Board of Directors from the Certified membership of the Association. The Chairman shall also serve as Chairman of the Board of Certification.
Section 2
Term of Office: Two years and may be reappointed with approval of Board of Directors.
Section 3
Committee Members: The number of committee members will be determined by the committee Chairman to form a workable group.
Section 4
Selection of Committee Members: Recommended by the Chairman appointed by the President with the approval of the Board of Directors from the Certified membership of the Association.
Section 5
Term of Office: Two years and may be reappointed with approval of Board of Directors.
Section 6
Functions and Responsibilities:
1. Cooperates with the Professional Education Committee in the establishment of certification requirements and procedures for certification.
2. Assists in the construction and revision of appropriate certification examinations.

ARTICLE XII
BOARD OF CERTIFICATION
Section 1
Selection of Chairman: Chairman of Board of Certification is the Certification Committee Chairman.
Section 2
Board Members: The members will be the same as Certification Committee plus consultants.
Section 3
Selection of Board Members: Recommended by the Chairman appointed by the President with the approval of the Board of Directors from the Certified membership of the Association. Consultant members of Board of Certification need not be Certified members of the Association. The ratio shall be three Certified members to one consultant.
Section 4
Term of Office: Two years and may be reappointed by the Board of Directors.
Section 5
Functions and Responsibilities:
1. Receives and reviews all applications for certification.
2. Coordinates and supervises the administration and grading of all certification examinations.
3. Ascertains the fulfillment of Certification requirements and makes recommendations to the Board of Directors for final approval.

ARTICLE XIII
DRUG EDUCATION COMMITTEE
Section 1
Selection of Chairman: Appointed by the President with agreement of the Executive Director and the approval of the Board of Directors from the Certified membership of the Association.
Section 2
Term of Office: Two years and may be reappointed with approval of Board of Directors.
Section 3
Committee Members: The number of committee members will be determined by the committee Chairman to form a workable group.
Section 4
Selection of Committee Members: Recommended by the Chairman appointed by the President with the approval of the Board of Directors from the Certified membership of the Association.
Section 5
Term of Office: Two years and may be reappointed with approval of Board of Directors.
Section 6
Functions and Responsibilities:
1. To develop drug education material for use and distribution by the Association.
2. To maintain a bibliography on resource material pertaining to drug education.

ARTICLE XIV
ETHICS COMMITTEE
Section 1
Selection of Chairman: Appointed by the President with agreement of the Executive Director and approval of the Board of Directors from the Certified membership of the Association.
Section 2
Term of Office: Two years and may be reappointed with approval of Board of Directors.
Section 3
Committee Members: The number of committee members will be determined by the committee Chairman to form a workable group.
Section 4
Selection of Committee Members: Recommended by the Chairman appointed by the President with the approval of the Board of Directors from the Certified membership of the Association.
Section 5
Term of Office: Two years and may be reappointed with approval of Board of Directors.
Section 6
Functions and Responsibilities:
1. Accepts and investigates reports of violations of the Association Code of Ethics.
2. Reports to Board of Directors Committee findings and recommendations.

ARTICLE XV
GRANTS AND SCHOLARSHIP COMMITTEE
Section 1
Selection of Chairman: Appointed by the President with agreement of Executive Director and approval of the Board of Directors from the Certified membership of the Association.
Section 2
Term of Office: Two years and may be reappointed with approval of Board of Directors.
Section 3
Committee Members: The number of committee members will be determined by the committee Chairman to form a workable group.
Section 4
Selection of Committee Members: Recommended by the Chairman and appointed by
the President with the approval of the Board of Directors.

Section 5
Term of Office: Two years and may be reappointed.

Section 6
Functions and Responsibilities:
1. Promote and encourage scholarship through gifts, loans, and grants-in-aid.
2. Establish guidelines and criteria for the awarding of educational grants and scholarships.
3. Stimulates and develops scholarships sponsored by industry, individual donors, service clubs, minority groups, associations, athletic conferences, and professional sports leagues.
4. Formulates recommendations for rules and administration of self-help programs, either loan or job, to include college loan, National Defense loan, Education Act loan, and State Guaranteed or Federal Insured loan.
5. Receives, reviews and screens all applications prior to April 1 and makes recommendations to Board of Directors for Association approval or rejection.

ARTICLE XVI
HISTORICAL AND ARCHIVES COMMITTEE

Section 1
Selection of Chairman: Appointed by the President with agreement of the Executive Director and approval of the Board of Directors from the Certified membership of the Association.

Section 2
Term of Office: Two years and may be reappointed.

Section 3
Committee Members: The number of committee members will be determined by the committee Chairman to form a workable group.

Section 4
Selection of Committee Members: Recommended by the Chairman appointed by the President with the approval of the Board of Directors from the Certified membership of the Association.

Section 5
Term of Office: Two years and may be reappointed with approval of Board of Directors.

Section 6
Functions and Responsibilities:
2. Establishes a plan for maintenance of historical records of the Association and preserving important archives.

ARTICLE XVII
HONORS AWARDS COMMITTEE

Section 1
Selection of Chairman: Appointed by the President with agreement of the Executive Director and the approval of the Board of Directors from the Certified membership of the Association. The Chairman of the Honor Awards Committee will be Chairman of the N.A.T.A. Hall of Fame Committee.

Section 2
Term of Office: Two years and may be reappointed with approval of Board of Directors.

Section 3
Committee Members: The number of committee members will be determined by the committee Chairman to form a workable group.

Section 4
Selection of Committee Members: Recommended by the Chairman appointed by the President with the approval of the Board of Directors from the Certified membership of the Association.

Section 5
Term of Office: Two years and may be reappointed with approval of Board of Directors.

Section 6
Functions and Responsibilities:
1. Coordinates and supervises the establishment and disbursement of all special recognition awards presented under the auspices of the Association.
2. Receives, prior to February, reviews and screens all candidates for the 25 Year Award, Honorary Members Award, and Helms Award and makes recommendations to the Board of Directors prior to March 15.
3. Receives and reviews all proposals for the initiation of new or additional honor awards and makes recommendations to the Board of Directors for Association approval or rejection.
4. The Citizens Savings Athletic Foundation (formerly Helms Hall of Fame), N.A.T.A. Hall of Fame Committee will function under the Honor Awards Committee, but the committee will remain secret.

ARTICLE XVIII
INTERNATIONAL GAMES TRAINER NOMINATION COMMITTEE

Section 1
Selection of Chairman: Appointed by the President with agreement of the Executive Director and the approval of the Board of Directors from the Certified membership of the Association.

Section 2
Term of Office: Two years and may be reappointed with approval of Board of Directors.

Section 3
Committee Members: The number of committee members will be determined by the committee Chairman to form a workable group. The committee will remain secret.

Section 4
Selection of Committee Members: Recommended by the Chairman appointed by the President with the approval of the Board of Directors from the Certified membership of the Association.

Section 5
Term of Office: Two years and may be reappointed with approval of Board of Directors.

Section 6
Functions and Responsibilities:
1. Formulates procedures for NATA members to apply for nomination to athletic training staff for international games and submit such procedures to Board of Directors for approval.
2. Conduct process of nominating the applicants to the Medical Services Committee of International Games.
Sub-Committee for Continuing Education

Section 1
Selection of Chairman: Recommended by the Chairman and appointed by the President with the agreement of the Executive Director and approval of the Board of Directors from the Certified membership of the Association.

Section 2
Term of Office: Two years and may be reappointed by the President with the agreement of the Executive Director and approval of the Board of Directors from the Certified membership of the Association.

Section 3
Committee Members: The number of committee members will be determined by the President with the agreement of the Executive Director and appointed by the President with the approval of the Board of Directors from the Certified membership of the Association.

ARTICLE XXIII
PROFESSIONAL EDUCATION COMMITTEE

Section 1
Selection of Chairman: Recommended by the Chairman and appointed by the President with the agreement of the Executive Director and approval of the Board of Directors from the Certified membership of the Association.

Section 2
Term of Office: Two years and may be reappointed with approval of the Board of Directors.

Section 3
Committee Members: The number of committee members will be determined by the committee Chairman to form a workable group.

Section 4
Selection of Committee Members: Recommended by the Chairman and appointed by the President with the approval of the Board of Directors from the Certified membership of the Association.

Section 5
Term of Office: Two years and may be reappointed with approval of the Board of Directors.

Section 6
Functions and Responsibilities:
1. Investigates and studies all possibilities for the professional education and advancement of the Association, its members, and the athletic training profession and makes recommendations to the Board of Directors.
2. Confers with appropriate consultants regarding recommendations for professional advancement.
3. Makes recommendations to the Board of Directors for the accreditation of schools offering graduate and undergraduate preparation in athletic training.
4. Establishes and supervises the enforcement of professional education standards and criteria for all association certified athletic trainers.
5. Cooperates with the Certification Committee in the establishment of certification requirements and criteria.
6. Investigates and recommends opportunities for in-service training and continuing education for Association members.
7. Serves as a consulting and liaison agency between the Association and educational institutions providing or preparing to provide professional preparation for athletic trainers.
8. Sends educational requirements and any future changes in educational standards, to all Recruitment Committee members.

Section 7
Sub-Committee for Graduate Education
1. Selection of Chairman: Recommended by the Chairman of the Professional Education Committee and appointed by the President with agreement of the Executive Director and approval by the Board of Directors from the Professional Education Committee members.
2. Term of Office: Two years and may be reappointed with approval of the Board of Directors.
3. Sub-Committee members: The number of sub-committee members to be determined by the sub-committee Chairman to form a workable group.
4. Term of Office: Two years and may be reappointed with approval of the Board of Directors.
5. Functions: To work in the area of graduate education and make recommendations to the Professional Education Committee as a whole.

Section 8
Sub-Committee for Continuing Education
1. Selection of Chairman: Recommended by the Chairman of the Professional Education Committee and appointed by the President with agreement of the Executive Director and approval by the Board of Directors from the Professional Education Committee members.
2. Term of Office: Two years and may be reappointed with approval of the Board of Directors.
3. Sub-Committee members: The number of sub-committee members to be determined by the sub-committee Chairman to form a workable group.
4. Term of Office: Two years and may be reappointed with approval of the Board of Directors.
5. Functions: To work in the area of continuing education and make recommendations to the Professional Education Committee as a whole.

ARTICLE XXIV
PUBLIC RELATIONS AND INFORMATION COMMITTEE

Section 1
Selection of Chairman: Appointed by the President with agreement of the Executive Director and approval of the Board of Directors from the Certified membership of the Association.

Section 2
Term of Office: Two years and may be reappointed by the Board of Directors.

Section 3
Committee Members: The number of committee members will be determined by the committee Chairman to form a workable group.

Section 4
Selection of Committee Members: Appointed by the Chairman with the approval of the Board of Directors from the Certified membership of the Association.

Section 5
Term of Office: Two years and may be reappointed with approval of the Board of Directors.

Section 6
Functions and Responsibilities:
1. Establishes and maintains an effective public relations program for the Association by preparing and distributing appropriate news releases, feature stories, etc. to the various news media, radio, television and newspapers.
2. Prepares and submits the results of Association research to Journal Committees.
3. Participates in the Board of Directors' annual report to the general assembly, assisting the President to present the Association's activities and future plans.
4. Engages in the development of cooperative programs with the Association to promote the purposes and objectives of the Association.

ARTICLE XXV
RESEARCH AND INJURY COMMITTEE

Section 1
Selection of Chairman: Appointed by the President with agreement of the Executive Director and approval of the Board of Directors from the Certified membership of the Association.

Section 2
Term of Office: Two years and may be reappointed by the Board of Directors.

Section 3
Committee Members: The number of committee members will be determined by the committee Chairman to form a workable group.

Section 4
Selection of Committee Members: Recommended by the Chairman and appointed by the President with the approval of the Board of Directors from the Certified membership of the Association.

Section 5
Term of Office: Two years and may be reappointed with approval of the Board of Directors.

Section 6
Function and Responsibilities:
1. Coordinates all research efforts conducted under the auspices of the Association.
2. Receives and evaluates all research proposals from Association members, schools and other institutions and makes recommendations to the Board of Directors for research projects worthy of Association support and sponsorship.
3. Makes recommendations to the ten association districts for presentation of research findings at regional and district meetings.
4. Makes recommendations to the Board of Directors, the National Convention Chairman, and the National Program Committee for presentation of research findings at national meetings.
5. Prepares and submits the results of Association research to Journal Committees for possible publication in Athletic Training Journal of the National Athletic Trainers' Association and other Association sponsored publications.

ARTICLE XXVI
MEMBERSHIP PROVISIONS AND DUES

Section 1
Membership Classes
1. CERTIFIED CODE 1
   Qualifications for Membership:
   Must be a Certified Athletic Trainer (A.T.C.).
   Dues: $25.00 per year plus District Dues.
   Certified and Retired Certified members only are entitled to vote on N.A.T.A. affairs and to hold N.A.T.A. office.
   Provisions for maintaining Certification:
   A person who is once certified as an Athletic Trainer (A.T.C.) remains certified as long as he or she meets the minimum requirements for continuing professional education and only as long as such requirements are met.
   Continuing Professional Education Units (CPEU) shall be accumulated every three (3) calendar years. The three year intervals shall be determined by the Board of Directors.
   A Certified Athletic Trainer is responsible for sending to the N.A.T.A. National Office an approved statement of any Continuing Professional Education Units (CPEU) to be entered on record. Such a statement must be sent to the National office within 30 days after the date of acquiring such units.
   A Certified Athletic Trainer who does not accumulate a recorded number of CPEU's every three (3) calendar years equal to at least the minimum requirement shall have his/her certificate suspended. The person has the right to appeal.
   If the person whose certification is suspended does not accumulate sufficient CPEU's to meet the minimum requirements within two (2) years after the date of his suspension, his/her certification shall be cancelled.
   A person whose Certified Membership was cancelled or changed to a different class of membership because of the application of the "Actively Engaged" definition and agreement, and who wishes to have his/her Certification reinstated shall apply to the Director and Secretary of the District in which he/she held Certified membership for reinstatement. If the district officers agree that the person is entitled to reinstatement they should approve the application and forward the decision to the N.A.T.A. National Office. An application for reinstatement under the provisions of this paragraph must be received by the proper district officers before May 30.
   2. ASSOCIATE CODE 2
   Qualifications for Membership:
   Bachelor's degree from an accredited college or university.
   Proof of successful completion of an athletic training course (minimum 2 semester hours or 3 quarter hours credit) from an accredited college or university. Convention courses shall not count.
   Proof of current certification in standard first aid and cardio-pulmonary
Note: Revision of June 11, 1976 eliminated high school students for new memberships. A high school student in good standing at that time is allowed to continue in the Student class of membership for one (1) year after the degree is awarded if he/she has had a minimum of 600 hours of acceptable athletic training experience under direct supervision of a Certified Athletic Trainer and is preparing for the profession of athletic training. A Student member who is awarded a degree (bachelor's or graduate) and who ceases to be a full time student and who does not become Certified and does not obtain a job as an actively engaged athletic trainer may continue membership in the Student class for one (1) year after the degree is awarded.

A Student member who transfers to a school (as a full time student) at which he/she is unable to satisfy the requirement of performing athletic training under direct supervision of a Certified Athletic Trainer may continue membership in the Student class provided he/she has had a minimum of 600 hours of acceptable athletic training experience under direct supervision of a Certified Athletic Trainer.

The time during which a person in the Student membership class shall not count as time engaged in athletic training for purposes of determining the number of years in the profession.

Student members are not entitled to vote on N.A.T.A. affairs or to hold N.A.T.A. office.

Dues: National — $10.00 plus District dues.

5. AFFILIATE CODE 5

This membership class is open to individuals who are interested in the relationships of athletic training to education, biological sciences, psychology, athletics or sports medicine but who at the time are not directly related to athletic training.

Qualifications for membership:

Bachelor's degree from an accredited college or university or certification in physical therapy.

Professionally working in education, athletics, research or medicine.

Note: Physicians who are team physicians should be N.A.T.A. members in the Advisory class.

Affiliate members are not entitled to vote on N.A.T.A. affairs.

Dues: National — $25.00 per year plus District dues.

6. ADVISORY CODE 6

Qualifications for membership:

Physicians (MD or DO) who are directly associated with a sports program and are providing medical care and advice to members of the teams and advising the athletic trainer in regard to his/her duties are eligible for membership in this class.

A Certified or Associate member must nominate a prospective candidate for this membership. The nomination shall then be presented to the District Secretary for approval.

Advisory members are not entitled to vote on N.A.T.A. affairs or to hold office.

Dues: National — $25.00 per year plus District dues.

7. ALLIED CODE 7

This membership class is open to individuals whose business interest is related to athletic training or athletics in general.

Allied members are not entitled to vote on N.A.T.A. affairs or to hold office.

Dues: National — $25.00 per year plus District dues.

8. HONORARY CODE 8

An individual may be awarded Honorary membership through the National organization only. A person who, by virtue of his/her acts and speeches, shows profound interest in the athletic training profession and in enhancing its service to those in athletics shall be eligible for membership in this class.

Nominees may be made only by a Certified member through his/her district director who will then forward the nomination and resume to the Chairman of the Honor and Awards Committee. The committee will make recommendations to the Board of Directors for its approval.

Honorary members are not entitled to vote on N.A.T.A. affairs or to hold office.

There are no dues for Honorary members.

Section 2

APPROVAL OF APPLICATIONS FOR MEMBERSHIP

1. Membership in the N.A.T.A. must come through a district and is subject to the district secretary's approval. In cases of doubt regarding an applicant's qualifications for membership, the National Membership Committee shall be consulted.

2. Candidates for membership (except Honorary) shall be recommended by at least one (1) Certified member of the district in which the candidate is located. Two (2) copies of the application for membership shall be sent to the district secretary. If the candidate is accepted (class of membership designated) the membership is recorded for the district and a copy of the approved application with National dues is sent to the National Office within 30 days after the date of acquiring such units. If the person whose Associate membership is suspended does not accumulate the minimum requirement within two (2) years from the date of membership suspension, his/her membership shall be cancelled. Associate members are not entitled to vote on N.A.T.A. affairs or to hold N.A.T.A. office.

Dues: National — $25.00 plus District dues.

3. RETIRED

Retired, Certified — Code 3
Retired, Non-Certified — Code 0

A Certified or Associate member who is a Certified Athletic Trainer, who has retired before age 55, shall have the privilege of continuing in the class of membership held at the time of retirement, without further payment of dues.

A Certified or Associate member who is eligible for Retired status and who wishes to continue membership in the N.A.T.A. in the Retired class may request change to this class from the Secretary of the District in which he/she is a member.

A Retired Certified member shall continue to have the privilege of voting on N.A.T.A. affairs and to hold N.A.T.A. office.

Dues: National — $25.00 plus District dues.

4. STUDENT CODE 4

Note: Revision of June 11, 1976 eliminated high school students for new memberships. A high school student in good standing at that time is allowed to continue student membership.

Qualifications for Membership:

A person who is a full time student (graduate or undergraduate) in a college or university and who is performing the duties of a student athletic trainer under the direct supervision of a Certified Athletic Trainer and is preparing for the profession of athletic training is eligible for Student membership.

A student must be recommended by the Certified Athletic Trainer under whom the student is working. A student who is enrolled in an approved N.A.T.A. curriculum and has not yet progressed to clinical work may be approved by the Certified Athletic Trainer who is the program director.

If a person ceases to be a full time student he/she is not eligible for membership in the Student class provided he/she has had a minimum of 600 hours of acceptable athletic training experience under the direct supervision of a Certified Athletic Trainer.

A Student member who is awarded a degree (bachelor's or graduate) and who ceases to be a full time student and who does not become Certified and does not obtain a job as an actively engaged athletic trainer may continue membership in the Student class for one (1) year after the degree is awarded.

A Student member who transfers to a school (as a full time student) at which he/she is unable to satisfy the requirement of performing athletic training under direct supervision of a Certified Athletic Trainer may continue membership in the Student class provided he/she has had a minimum of 600 hours of acceptable athletic training experience under direct supervision of a Certified Athletic Trainer.

The time during which a person in the Student membership class shall not count as time engaged in athletic training for purposes of determining the number of years in the profession.

Student members are not entitled to vote on N.A.T.A. affairs or to hold N.A.T.A. office.

Dues: National — $10.00 plus District dues.

5. AFFILIATE CODE 5

This membership class is open to individuals who are interested in the relationships of athletic training to education, biological sciences, psychology, athletics or sports medicine but who at the time are not directly related to athletic training.

Qualifications for membership:

Bachelor's degree from an accredited college or university or certification in physical therapy.

Professionally working in education, athletics, research or medicine.

Note: Physicians who are team physicians should be N.A.T.A. members in the Advisory class.

Affiliate members are not entitled to vote on N.A.T.A. affairs.

Dues: National — $25.00 per year plus District dues.

6. ADVISORY CODE 6

Qualifications for membership:

Physicians (MD or DO) who are directly associated with a sports program and are providing medical care and advice to members of the teams and advising the athletic trainer in regard to his/her duties are eligible for membership in this class.

A Certified or Associate member must nominate a prospective candidate for this membership. The nomination shall then be presented to the District Secretary for approval.

Advisory members are not entitled to vote on N.A.T.A. affairs or to hold office.

Dues: National — $25.00 per year plus District dues.

7. ALLIED CODE 7

This membership class is open to individuals whose business interest is related to athletic training or athletics in general.

Allied members are not entitled to vote on N.A.T.A. affairs or to hold office.

Dues: National — $25.00 per year plus District dues.

8. HONORARY CODE 8

An individual may be awarded Honorary membership through the National organization only. A person who, by virtue of his/her acts and speeches, shows profound interest in the athletic training profession and in enhancing its service to those in athletics shall be eligible for membership in this class.

Nominees may be made only by a Certified member through his/her district director who will then forward the nomination and resume to the Chairman of the Honor and Awards Committee. The committee will make recommendations to the Board of Directors for its approval.

Honorary members are not entitled to vote on N.A.T.A. affairs or to hold office.

There are no dues for Honorary members.
SUMMARY OF ACTIONS

The following matters were discussed and actions as indicated taken at the meeting of the Board of Directors of the NATA held at St. Louis, Missouri, on February 3, 1979.

The following were present:

Mr. William Chambers, President.
Mr. Otho Davis, Executive Director.
Mr. Bruce Melin, Parliamentarian.
Mr. Wesley Jordan, District 1.
Mr. Dick Malacrea, District 2.
Mr. Herman Bunch, District 3.
Mr. Gordon Stoddard, District 4.
Mr. Frank Randall, District 5.
Mr. Cash Birdwell, District 6.
Mr. Troy Young, District 7.
Mr. Don Chu, District 8.
Mr. Larry Standifer, District 10

I. AUDIOVISUAL AIDS:

December 8, 1978

Mr. Otho Davis
Executive Director
N.A.T.A.
112 South Pitt St.
P.O. Box 1865
Greenville, NC 27834

Dear Otho:

This year the Audio-Visual Committee has been working on developing a National Trainers’ Directory. We have been attempting to develop this with the help and hard work of Mr. Hugh Grubiss of Cramer Chemical Company. Hugh should by this date be in possession of the computer list of mailing addresses of the membership and I expect to hear from him shortly in this regard.

We have also been keeping on top of mailing our A-V bibliography to those who request a copy.

Here’s hoping that you and yours enjoy a happy holiday season.

Sincerely,

Bob Burkardt
Director of Physical Education
Certified Athletic Trainer

II. CAREER INFORMATION AND SERVICES COMMITTEE:

MEMORANDUM TO: N.A.T.A. Board of Directors
FROM: C.O. Demers, Chairman, Career Information & Service Committee
SUBJECT: Semianual Report

1. Individual requests for Career Information continues to be heavy.
2. As anticipated, requests for bulk supply of brochures has decreased since our policy charging for the same has been adapted.
3. This situation has resulted in our last printing being able to cover a longer period of time than had been anticipated.
4. Consequently due to personnel changes in N.A.T.A. district officers and committee chairmanships along with minor changes in the list of schools having approved curricula, we are forced to distribute a brochure which is somewhat outdated.
5. To compensate for this undesirable situation, I plan to take the following action:
   a. Attempt to efficiently move a greater volume of our present brochures by supplying all officers, committee chairman and approved schools for their use.
   b. Publish a one panel insert listing the corrections to the brochure.
6. To eliminate this problem in the future, I suggest the following:
   a. Limit the initial printing to 10,000 copies.
   b. Restrict all material which might tend to be superseded to the brochure insert.
   This would allow for the brochure to be timely for a longer period and allow for greater ease in updating the material.

ACTION:

Motion by District 8, seconded by District 4 and carried to approve the limitation of the Career Information Services brochure to an initial printing of 10,000 copies and to restrict all material which might tend to be superseded to the brochure insert; this to allow for the brochure to be timely for a longer period and allow for greater ease in updating the material.

III. CERTIFICATION:

BOARD OF CERTIFICATION
NATIONAL ATHLETIC TRAINERS ASSOCIATION
REPORT TO THE BOARD OF DIRECTORS
JANUARY 1979
RODERICK G. MOORE II
CHAIRMAN
VALPARAISO UNIVERSITY

COMMITTEE MEMBERSHIP
MARJORIE ALBOHM, Indiana University
JOHN ANDERSON, M.D., Bowdoin College (advisory)
FREDERICK BEHLING, M.D., Palo Alto, California (Advisory)
MICHAEL J. CAPPETO, Columbia University
JAMES DODSON, Midland High School, Texas
JOE GIECK, E.D., University of Virginia
BUFORD HARMON, M.D., San Antonio Junior College, California
RICHARD F. IRVIN, Ed.D., Oregon State University
CARL KREIN, Central Connecticut State College
CHARLES KRPAITA, Cupertino, California
RUSSELL MILLER, (On leave 1977-1979)
STEVE MOORE, Tennessee Tech University
JAMES PHILLIPS, United States Military Academy

MEETINGS

The Committee met June 11, 1978, in Las Vegas, Nevada. Complete minutes of that meeting are available upon request from the committee chairman. The next full meeting of the Committee is scheduled for January 4, 1979, in Nashville, Tennessee.

ACTIVITIES AND ACCOMPLISHEMENTS - June 1978 to December 1978

1. EXAMINATIONS

Sixty-five candidates were examined June 12, 1978, in Las Vegas, Nevada. Of
ACTION:  
Motion by District 9, seconded by District 2 and carried to approve the budgetary request of $100.

With regard to the use of the Term of "Chairman", Mr. Chambers to write to the Committee Chairman and indicate to him that in order to be consistent with the bylaws the term "Chairman" should be left as is.

V. ETHICS:  
Report accepted as information with no other action taken by the Board.

VI. GRANTS AND SCHOLARSHIPS:  
Moved by District 7, seconded by District 2 that the association will contribute $500 for the Pinky Newell scholarship with the President to write to Cramer Products requesting that they increase their contribution to $500, indicating to them their other choices as to the disposition of their donation in the event they did not desire to go to this amount. Motion carried

VII. HISTORY AND ARCHIVES:  
Correspondence received noted as information with the Board taking no other action.

VIII. HONOR AWARDS:  
It has been requested that a more suitable 25 year award be presented. Mr. Young suggested that instead of the present certificate that perhaps a plaque could be made; he then suggested how this might be done. It was the consensus that Mr. Young look further into this matter and report his subsequent findings to Mr. Davis, Mr. Chambers, in the meanwhile was to let Mr. Sullivan know was happening in this regard, with no other official action being taken.

IX. JOURNAL:  
Moved by District 3, seconded by District 6 and carried that the interest of Mr. Thompson in resigning as editor or any action thereon be denied until further information is received from Mr. Thompson.

Moved by District 6, seconded by District 3 to deny the request of Mr. John Maley of Chattanooga Pharmacal Company to sponsor a writing contest for NATA members. Motion carried.

Moved by District 8, seconded by District 7 that the Board members, through their districts lead their help to John Wells in connection with his abstracts for the Journal. Motion carried.

Moved by District 2, seconded by District 10, that a $50 honorarium be paid to all individuals having original, unpublished articles published in the journal. After a discussion concerning this practice among other Journals, the motion was voted upon, with Districts 2, 4, 5 and 10 being in favor; Districts 1, 3, 6 and 7 being against, District 9 being against and District 8 abstaining, the motion thereupon being declared as Lost.

X. MEMBERSHIP:  
Attention was called to the request concerning the matter of Mr. Joe Donovan by Mr. Malarek, with Mr. Malarek, after explaining the situation in detail, then moving that Mr. Donovan be given special consideration and granted certification through executive procedure. There being no second to the motion, the motion was then declared to be dead for lack of a second.

Moved by District 9, seconded by District 4 that reinstatement of R. Scott Teets to certification and certified membership NOT be approved.

XI. NATIONAL CONVENTION:  
Report as to present arrangements received as information with no other official actions taken by the Board.

CONVENTION SITES: The Board considered the request of Orlando in lieu of the contemplated Seattle forthcoming convention site. After a brief discussion and there being indicated an apparent discrepancy in feelings as to this matter, it was moved, seconded and carried that further action on this matter be tabled until Mr. Hoover had an opportunity to investigate both cities and could subsequently present some report on this matter at the June board meeting.

XII. PLACEMENT COMMITTEE:  
To: Otho Davis
From: Rod Poindexter
Re: Placement Committee Mid-Year Report
Date: December 15, 1978

Request for Board Approval of New Placement Committee Members.

District 1  
Phil Mateja  
University of Maine  
Orono, ME 04473

District 10  
Mark Smaha  
Washington State University  
Pullman, WA 99164

These changes are requested to replace former members that are unable to continue on the committee because of other commitments.

The NATA Placement Committee has published five notices from June 28, 1978-December 12, 1978. These notices included 94 position vacancies. The services of the committee because of other commentments.

The NATA Placement Committee has published five notices from June 28, 1978-December 12, 1978. These notices included 94 position vacancies. The services of the committee are used by over 700 NATA members.

ACTION:  
Upon the recommendation of the committee, it was moved by District 4, seconded by District 10 and carried to approve the addition of Phil Mateja, Mark Smaha and John Scissors to the committee.

XIII. PROFESSIONAL EDUCATION:  
Mr. Rodgren and Mr. Schrader appeared for the committee, indicating the activities of the committee since its last report to the Board. After being questioned in detail by the various board members concerning special matters concerning professional education and the departure of both Mr. Rodgren and Mr. Schrader, the Board, after further brief discussion, acted as follows:

On the matter of having the same individual on two committees, the consensus was that the Directors discuss this matter further with their respective districts and that the matter be put on the agenda for the June board meeting for further discussion and/or action.
SUMMARY OF ACTIONS

The following matters were discussed and actions as indicated taken at the meeting of the Board of Directors of the NATA held at St. Louis, Missouri, on February 3, 1979. The following were present:

Mr. William Chambers, President.
Mr. Otho Davis, Executive Director.
Mr. Bruce Melin, Parliamentarian.
Mr. Wesley Jordan, District 1.
Mr. Dick Malacrea, District 2.
Mr. Herman Bunch, District 3.
Mr. Gordon Stoddard, District 4.
Mr. Frank Randall, District 5.
Mr. Cash Birdwell, District 6.
Mr. Troy Young, District 7.
Mr. Don Chu, District 8.
Mr. Bobby Barton, District 9.
Mr. Larry Standifer, District 10.

I. AUDIOVISUAL AIDS:

December 8, 1978

Mr. Otho Davis
Executive Director
N.A.T.A.
110 South Pitt St.
P.O. Box 1860
Greenville, NC 27834

Dear Otho,

This year the Audio-Visual Committee has been working on developing a National Trainers' Directory. We have been attempting to develop this with the help and hard work of Mr. Hugh Grubiss of Cramer Chemical Company. Hugh should by this date be in possession of the computer list of mailing addresses of the membership and I expect to hear from him shortly in this regard.

We have also been keeping on top of mailing our A-V bibliography to those who request a copy.

Here's hoping that you and yours enjoy a happy holiday season.

Sincerely,

Bob Burkardt
Director of Physical Education
Certified Athletic Trainer

II. CAREER INFORMATION AND SERVICES COMMITTEE:

MEMORANDUM TO: N.A.T.A. Board of Directors
FROM: C.O. Demers, Chairman, Career Information & Services Committee
SUBJECT: Semiannual Report

1. Individual requests for Career Information continues to be heavy.
2. As anticipated, requests for bulk supply of brochures has decreased since our policy of charging for the same has been adapted.
3. This situation has resulted in our last printing being less than had been anticipated.
4. Consequently due to personnel changes in N.A.T. chairmanships along with minor changes in the curricula, we are forced to distribute a brochure with:
   a. Attempt to efficiently move a greater volume by concentrating efforts of officers, committee chairmen and:
   b. Publish a one panel insert listing the correct:
5. To eliminate this problem in the future, I suggest:
   a. Limit the initial printing to 10,000 copies.
   b. Restrict all material which might tend to be superfluous and allow for the brochure to be timely for a longer period of updating the material.

ACTION:
Motion by District 8, seconded by District 4 and carried to restrict all material which might tend to be superfluous and allow for the brochure to be timely for a longer period of updating the material.

III. CERTIFICATION:

BOARD OF CERTIFICATION
NATIONAL ATHLETIC TRAINER
REPORT TO THE BOARD OF DIRECTORS
JANUARY 1979

RODERICK G. MOORE
CHAIRMAN
VALPARAISO UNIVERSITY

COMMITTEE MEMBERSHIP

MARJORIE ALBOHM, Indiana University
JOHN ANDERSON, M.D., Bowdoin College (advisory)
FREDERICK BEHLING, M.D., Palo Alto, California
MICHAEL J. CAPPETO, Columbia University
JAMES DOSSON, Midland High School, Texas
JOE GIECK, E.A.D., University of Virginia
RUFORD HARMON, M.L.S., San Antonio Junior College
RICHARD F. IRVIN, Ed.D., Oregon State University
CARL KRATA, Central Connecticut State College
CHARLES KRATA, Cupertino, California
RUSSELL MILLER, On leave 1977-1979

STEVE MOORE, Tennessee Tech University
EDWARD J. PHILLIPS, United States Military Academy

MEETINGS
The Committee met June 11, 1978, in Las Vegas, Nevada. All meeting minutes are available upon request from the committee chairman.

ACTIVITIES AND ACCOMPLISHMENTS - June 1979

1. EXAMINATIONS

Sixty-five candidates were examined June 12, 1979.
this group, seventeen candidates opted to take the off-site oral-practical examination.

In August, 1978, 194 candidates were tested regionally in Iowa, California, Pennsylvania (2 sites), Michigan, Indiana, Oregon, Tennessee and Connecticut. Of this group, 69 candidates opted to take the off-site oral-practical examination.

December 12, 1978, 145 certified athletic trainers were involved in the examination process as on-site examiners. 102 certified athletic trainers have been trained as off-site examiners. A majority of these athletic trainers administered from one to five individual examinations.

One hundred off-site examinations were administered during 1978. Fourteen candidates failed the examination. The average raw score of 40.92 was 5.17 points higher than the average raw score of the on-site examination.

One hundred seventy-two candidates are scheduled to be examined at the regional sites, including the new Miami site. Additional sites may be needed for regional overflows in March. The list of 1978 sites, dates and deadlines is included as Attachment A.

2. CERTIFICATION OFFICE

The transition from Ann Arbor to Valparaiso went well but there are still many rough spots. The administrative assistant was sick for several weeks during the Fall and could not devote as much time as needed. Hopefully that stage is past. One part-time person was hired in September but released in December. A new part-time person will start the second week of January, 1979.

Several revisions in administrative procedures were realized as necessary to cut down the immense paperwork involved. There is now a separate application for each Section (I, II, III, IV) a candidate applies under. This has eliminated much of the confusion associated with which part of the application needed to be completed. Now each application must be completely filled out. A re-examination application has also been developed to end the confusion, failing candidates have found in the instructions this office sends to them. See Attachments B, C, D, E, F.

3. FINANCIAL STATUS

Financial statement of the regular certification account and the plaque account will be submitted for review as soon as possible after the books are closed December 31, 1978. Attachment G is a copy of the 3rd Quarter Statement which has already been distributed to the Board of Directors.

4. PLAQUE SALES

The plaques on hand were depleted so 500 more were ordered and have been received. A major problem has developed with the mailing cartons. The mailing cartons were received but were the wrong ones - an admitted company mistake - and the right ones were not sent. Several phone calls have righted the situation and by January 10, 1979, the backlog of orders can be sent out.

So far only two plaques have been returned due to damage in transit or dissatisfaction with the artist’s printing.

5. P.E.S. EXAMINATIONS

A steady drive has continued through the year to solicit new questions for the item bank. Carl Krein has headed this drive.

6. OFF-SITE ORAL-PRACTICAL EXAMINATION

The statistical results have already been mentioned. Richard Irvin has prepared several alternate questions which can be used to develop alternate forms of the examination. These will begin to be used in 1979. Attachment H is a list of approved off-site examiners.

7. COMMITTEE MEMBERSHIP

No action will be requested at this time as the Chairman is still gathering input from the Southeast and the Mid-West as to the needs of the areas and qualifications of potential members to the Board of Certification. Specific recommendations will be forthcoming in June.

Mr. Edward J. Fillings, United States Military Academy, will be retiring from the Board on February 1, 1979. He was appointed to the original Board and our gratitude goes out to him for the tremendous job he has done over the past eleven years.

NEW BUSINESS

No new action is recommended to the Board of Directors for their consideration at this time.

Thank you for your time.

Respectfully submitted,
Roderick G. Moore II
Chairman

December 28, 1978

ACTION:

Moved by District 6, seconded by District 7 that the report as presented by accepted.

Motion carried.

Moved by District 3, seconded by District 7 and carried that the President notify Mr. Moore that at the expense of the Board of Certification that the examination be administered by those individuals who were deprived of taking the examination at Palo Alto, by one individual tester going to the test or that individuals be given compensation to travel to the closest spring examination site, this action to take place within three-month period.

Moved by District 10, seconded by District 7 to have Mr. Moore explain why there is such a long lag in the return of test results. Motion carried.

IV. DRUG EDUCATION:

1. Requests for Drug posters were referred to the Fiesta Bowl Committee which will make their selection and/or action.

2. Due to the change in positions of the Chairman of the Drug Education Committee from Louisiana State University to State University in Mars Hill College, and due to the change in financial provisions of the two institutions, a budgetary request of $100.00 is requested for the purchase of drug education materials and publications. While at Louisiana State University these materials could be ordered through the Health Education courses. However, at Mars Hill College, the Drug Education Chairman is responsible for Sports Medicine and the fund for drug education materials is not available. In addition, while in Health Education at Louisiana State University, the Drug Education Chairman would receive examination copies of drug education publications. These examination copies are no longer made available.

3. The Drug Education Committee would like to go on record in support of the Board of Directors of the National Athletic Trainer’s Association in their discussion on Wednesday evening June 14, 1978, to retain the title of Chairman as opposed to chairperson.

Respectfully submitted,
John Wells, Chairman

ACTION:

Motion by District 9, seconded by District 2 and carried to approve the budgetary request of $100.00.

With regard to the use of the term of “Chairman”, Mr. Chambers to write to the Committee Chairman and indicate to him that in order to be consistent with the bylaws the term “Chairman” should be left as is.

V. ETHICS:

Report accepted as information with no other action taken by the Board.

VI. GRANTS AND SCHOLARSHIPS:

Moved by District 7, seconded by District 3 that the association will contribute $500 for the Pinky Newell scholarship with the President to write to Cramer Products requesting that they increase their contribution to $500, indicating to them their other choices as to the disposition of their donation in the event they did not desire to go to this amount. Motion carried

VII. HISTORY AND ARCHIVES:

Correspondence received noted as information with the Board taking no other action.

VIII. HONOR AWARDS:

It has been requested that a more suitable 25 year award be presented. Mr. Young suggested that instead of the present certificate that perhaps a plaque could be made; be then suggested how this might be done. It was the consensus that Mr. Young look further into this matter and report his subsequent findings to Mr. Davis. Mr. Davis, Mr. Chambers, in the meanwhile that was instead to let Mr. Sullivan know was happening in this regard, with no other official action being taken.

IX. JOURNAL:

Moved by District 3, seconded by District 6 and carried that the interest of Mr. Thompson in resigning as editor or any action thereon be denied until further information is received from Mr. Thompson.

Moved by District 6, seconded by District 3 to deny the request of Mr. Maley of Chattanoonga Pharmaceutical Company to sponsor a writing contest for NATA members. Motion carried.

Moved by District 8, seconded by District 7 that the Board members, through their districts lend their help to John Wells in connection with his abstracts for the Journal. Motion carried.

Moved by District 2, seconded by District 10, that a $500 honorarium be paid to all individuals having original, unpublished articles published in the Journal. After a discussion concerning this practice among other Journals, the motion was voted upon, with Districts 2, 4, 5 and 10 being in favor; Districts 1, 3, 6 and 7 being against; District 9 being against and District 8 abstaining, the motion thereupon being declared as Lost.

X. MEMBERSHIP:

Attention was called to the request concerning the matter of Joe Donovan by Mr. Malecza, with Mr. Malecza, after explaining the situation in detail, then moving that Mr. Donovan be given special consideration and granted certification through executive procedure. There being no second to the motion, the motion was then declared to be dead for lack of a second.

Moved by District 9, seconded by District 4 that reinstatement of R. Scott Teets to certification and certified membership NOT be approved.

XI. NATIONAL CONVENTION:

Report as to present arrangements received as information with no other official actions taken by the Board.

CONVENTION SITES: The Board considered the request of Orlando in lieu of the contemplated Seattle forthcoming convention site. After a brief discussion and there being indicated no apparent discrepancy in feelings as to this matter, it was moved, seconded, and carried that further action on this matter be tabled until Mr. Hoover had an opportunity to investigate both cities and could subsequently present some report on this matter at the June board meeting.

XII. PLACEMENT COMMITTEE:

To Other Davis

From: Rod Poindeexter

Re: Placement Committee Mid-Year Report

Date: December 15, 1978

Request for Board Approval of New Placement Committee Members.

District 1

Phi Mateja

University of Maine Orono

Orono, ME 04473

District 10

Mark Smaha

Washington State University

Pullman WA 99164

These changes are requested to replace former members that are unable to continue on the committee because of other commitments.

The NATA Placement Committee has published five notices from June 28, 1978 - December 12, 1978. These notices included 94 position vacancies. The services of the committee are used by over 700 NATA members.

ACTION:

With the recommendation of the committee, it was moved by District 4, seconded by District 10 and carried to approve the addition of Phil Mateja, Mark Smaha and John Schers to the committee.

XIII. PROFESSIONAL EDUCATION:

Mr. Rodgren and Mr. Schrader appeared for the committee, indicating the activities of the committee since its last report to the Board. After being questioned in detail by the various board members concerning special matters concerning professional education and the departure of both Mr. Rodgren and Mr. Schrader, the Board, after further brief discussion, acted as follows:

On the matter of having the same individual on two committees, the consensus was that the Directors discuss this matter further with their respective districts and that the matter be put on the agenda for the June board meeting for further discussion and/or action.
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PROFESSIONAL EDUCATION COMMITTEE'S REPORT TO THE
NATIONAL ATHLETIC TRAINERS ASSOCIATION'S BOARD OF
DIRECTORS
Sayers "Bud" Miller, Chairman
January 20, 1979

I. Committee Meetings and Activities
Since the Professional Education Committee's meetings at the NATA's Annual Meeting in Las Vegas, Nevada, June 28 and 29, 1978, the committee has held the midyear meeting at the Opryland Hotel, Nashville, Tennessee on January 6 and 7, 1979. All members of the committee were present at the midyear meeting with the exception of L.F. "Tow" Diewn, Dennis Sealey, and Jerry Miller. In conjunction with this midyear meeting, the Professional Education Committee also presented its annual Professional Preparation Conference at the Opryland Hotel on January 7, 8, and 9, 1979. In addition, the Proceedings of the 1978 Professional Preparation Conference have been published and are on sale for the NATA membership.

II. Committee Membership and Assignments
Following are the members of the Professional Education Committee:
District 1 -
Joanne Dolcemaschio, Brown University
(Status survey of Curriculum Graduates)
District 2 -
Phil Donley, West Chester State College
(On leave of absence)
District 3 -
Al Proctor, Division of Sports Medicine, Department of Public Instruction, State of North Carolina
(Experimental Education Programs)
District 4 -
Ron Sendre, Central Michigan University
(Professional Displays & Publication)
District 5 -
John Schrader, Indiana University
(Professional Development Conference)
District 6 -
Glen Snow, Floyd Central High School, New Albany, Indiana
(Workshop at the Annual Meetings & High School Education)
District 7 -
P. Zekert, Lamar University
(Undergraduate Guidelines)
District 8 -
Gary Delforge, University of Arizona
(Graduate Education)
District 9 -
L. P. "Tow" Diewn, University of New Mexico
(Ethical Standards for Educational Programs)
District 10 -
Gerald Bell, Inter Lake Physical Therapy & Sports Medicine, Inc., moved from California State University at Sacramento
(Program Directors Council)
District 11 -
Jack Redgen, Vanderbilt University
(Continuing Education)
District 12 -
Les Ostering, University of Oregon
(Visitation Team Training & Procedures)
District 13 -
Dennis Sealey, University of Washington moved from University of Nebraska
(District 5) Since Gerald Bell has moved from mainland United States which will limit his effectiveness as a member of the Professional Education Committee, it is the feeling of the Committee that Jerry needs to be replaced by a more functional member from District #6. Jerry has already recognized the fact that he would be unable to carry out the responsibilities of directing the Program Directors Council and has resigned from this Committee position. Jerry has performed a great quantity of the highest quality work for the Committee and is commended for this service provided to the Committee.

Correction of Minutes

Approval of Minutes Printed in the Fall (1978) Issue of Athletic Training

Proposal to Rescind the Board of Directors Action of Placing Three Athletic Training Educational Programs on Probation

Approval and Reapproval of Athletic Training Education Programs

Although the Professional Education Committee does not ordinarily review and approve athletic training educational programs at its midyear meetings, it was felt that the circumstances in the following cases called for immediate action by the Committee:

A. The athletic training educational program at Central Michigan University was visited by the Committee's evaluation team composed of Sayers "Bud" Miller and Al Proctor on September 27 and 28, 1978. This visitation was carried out on these unusual dates because of a postponement of a previous late visitation of 1978 due to the late date illness of an evaluation team member which was not the fault of this institution. After reviewing the report of the visitation team and the positive response made by Central Michigan University officials, it was recommended that the Board of Directors reapprove this educational program for another five years becoming effective June 20, 1979, at the termination of the school's one-year extension of approval by the NATA.

B. The athletic training educational program at the State University of New York at Brockport was visited by Phil Donley, the Committee's assigned evaluation officer, on May 17 and 18, 1978, and found not to meet the recommendations of the Professional Education Committee. After three years of re-evaluating the revisions made by this institution to meet the guidelines established by the Committee, the Professional Education Committee found the State University of New York at Brockport to meet all of its recommendations at its June 1978 meetings and voted to recommend that the Board of Directors approve the program. However, a late resignation by Ken Kenyon, the program director, caused the Committee to withhold sending this recommendation to the Board of Directors until this position has been filled by a qualified individual. During late summer, the position of program director was filled by Dorothy Cohen who meets all the requirements of the NATA Undergraduate Guidelines. Therefore, the Committee recommended that the Board of Directors approve this educational program for two years becoming effective June 20, 1979. Only a two-year period of approval is requested since at that time it will have been five years from the last on-site visitation of this institution.

C. The athletic training educational program at the University of Illinois was visited by the Committee's assigned team of Dennis Sealey and Dan Foster on March 28 and 29, 1978. After receiving the very favorable report of the visitation team and the positive responses made by the University of Illinois, the Committee voted to recommend that the Board of Directors approve this program. A late resignation by Dana Gearhart, the program director, caused the Committee to withhold sending this recommendation to the Board of Directors at its last June meeting until the position of program director had been filled by a qualified individual. Since that meeting, the position was filled during the late summer months by David Jerabek who meets all the requirements and standards of the NATA Undergraduate Guidelines. Consequently, the Committee recommended that the Board of Directors approve the University of Illinois athletic training educational program for five years becoming effective June 20, 1979.

D. The athletic training education program at Grand Valley State College was visited by the Committee's assigned evaluation team composed of Ron Sendre and Steve Ristinger on April 27 and 28, 1978. After reviewing the evaluation team's report and the response made by the Grand Valley State College, the Professional Education Committee found this institution to meet all the standards of the NATA's Undergraduate Guidelines with the exception of the number of students per qualified supervisory certified athletic trainer. Therefore, it was recommended that another certified athletic trainer be hired and added to the athletic training staff before final consideration could be given to this program. In this regard, the Committee withheld any recommendation to the Board of Directors concerning the approval of this program at its June meeting. Since this meeting, the addition of an athletic training staff position has been created at this institution. Therefore, it was recommended that the Board of Directors approve this educational program for five years becoming effective June 20, 1979.

E. Both Washington State University and Ball State University were recommended by the Professional Education Committee to be placed on probation for one year and these recommendations were made by the Board of Directors at the NATA Annual Meeting, June, 1979. Both institutions made presentations at the midyear meeting of the Professional Education Committee in Las Vegas, Nevada on January 6, 1979, indicating their compliance to the Committee's recommendations and requirements. Therefore, it was recommended that the Board of Directors remove the probationary status upon these schools and approve both of these educational programs for five years becoming effective June 20, 1979.

Proposal to Rescind the Board of Directors Action of Placing Three Athletic Training Educational Programs on Probation

In reviewing the action taken by the NATA's Board of Directors at their meeting in Las Vegas on June 10-15, 1978, in which they placed Western Illinois University, Indiana State University (Graduate Level program), and Louisiana State University on probationary status for one year, the
VI. Athletic Training Educational Programs to be Evaluated and/or Visited for NATA Approval by the Committee’s June 1979 Meeting. The following athletic training educational programs will either be evaluated or reevaluated by the Professional Education Committee prior to our Committee meeting at the NATA’s Annual Meeting in St. Louis, June, 1979. If any District Director has any concerns or questions in regards to one or more of these programs, please contact one of the members of the assigned evaluation team and notify that person of your concerns:

- California State University at Fullerton (Reapproval)
- University of Wyoming (Reapproval)
- Eastern Illinois University (Reapproval)
- Evaluation Team: Ron Sender, Chief Officer; John Schrader
- University of Iowa (reapproval)
- Slippery Rock State College (Reapproval)
- Bowling Green State University (Initial Approval)
- Texas Christian University (On Probation)
- University of Vermont (Initial Approval)
- Evaluation Team: Joanne Dolcemaschio, Chief Officer; Jack Redgren
- University of South Carolina (Initial Approval)
- Evaluation Team: Al Proctor, Chief Officer; Glen Snow
- Northwest Missouri State University (Initial Approval)
- Evaluation Team: Jack Redgren, Chief Officer; John Schrader
- Oregon State University (On Probation)
- Progress report to be presented at the Committee’s June, 1979 meeting.
- Texas Christian University (On Probation)
- Progress report to be presented at the Committee’s June 1979 meeting.
- North Dakota University (On Probation)
- Appalachian State University (On Probation)
- Progress report to be presented at the Committee’s June 1979 meeting.
- Evaluation Team: Joanne Dolcemaschio, Chief Officer; Joe Godek
- University of South Carolina (Initial Approval)
- Evaluation Team: Al Proctor, Chief Officer; Glen Snow
- Evaluation Team: Jack Redgren, Chief Officer; John Schrader
- Oregon State University (On Probation)
- Progress report to be presented at the Committee’s June, 1979 meeting.
- Self-evaluation materials and the evaluation reports on completed visitations will be reviewed by the Committee members and noted violations and recommendations will be submitted to Paul Zwik or Gary Delforge prior to February 15, 1979. Schools on probation will not be reviewed by the Committee until in-person presentations have been completed at the Committee’s June meetings in St. Louis.

VII. Review of the 1978 Annual Reports Received from NATA Approved Athletic Training Educational Programs

Review of the 1978 Annual Reports will be completed by the members of the Professional Education Committee by March 1, 1979. All noted violations, concerns, recommendations in explorations about nature of these programs will be submitted to Sayers “Bud” Miller prior to the aforementioned deadline.

VIII. Study of Curriculum Graduates

Joanne Dolcemaschio reported that the 1978 survey on the status of curriculum graduates indicated very little difference in the data obtained in the 1977 survey. These statistics may be alarming to those individuals looking at these figures for the first time. The Committee felt that there were too many factors and variables whose effect are unknown or explainable in relation to data collected. More information is needed but some is unexplainable at this time. In addition, we have not been able to obtain similar data on the other routes leading to certification including the number of apprentice students obtaining athletic training positions. The Committee will continue to carry out this survey and Joanne will look into how the NATA computer service can be of assistance in this matter. Joanne also reported that she had not received any certification examination results from the Certification Subcommittee since obtaining the June, 1977 results. This problem has been reported to the Certification Committee and Bud Moore has promised to correct the situation.

IX. Experimental Education Programs

Status reports on the high school faculty instructional programs in athletic training were presented by the University of Northwestern and the State of North Carolina’s Department of Public Instruction. The Committee recommended to the NATA Board of Directors that both of these programs be approved for another year. In addition, the Committee recommended that the Board will have to take appropriate action for the 1979 graduates from the Northwestern University program to gain NATA membership and be accepted to take the certification examination. If this program is reapproved, then both the Membership Committee and Certification Committee should specifically notified of the action taken. Since there will not be any graduates from the State of North Carolina program in 1979, this action will not be necessary for this program.

X. Report on the Professional Preparation Conference

Approximately 150 persons attended the 1979 Professional Preparation Conference held at the Opryland Hotel, Nashville, Tennessee during the first week of January. Lou Osternig and Gary Delforge will also be carrying out a study to determine if a second 1980 Professional Preparation Conference could be carried out in the west at a different time of the year than the Nashville Conference and the Annual Meeting.

XI. Plans for the Continuing Education Workshops to be Held at the NATA Annual Meeting in St. Louis

Plans have been developed to present four-three-hour workshops on Sunday, June 16, 1979, prior to the NATA Annual Meeting to be held at St. Louis. One workshop will be a limited attendance session concerned with the dissection of shoulder, ankle and elbow and presented by Dr. Van Yeager. A second workshop will cover the topic of “Common Hand Injuries” and the presenter will be Dr. Barry Gaines. Dr. Burdge will also carry out a study to determine if a second 1980 Professional Preparation Conference could be carried out in the west at a different time of the year than the Nashville Conference and the Annual Meeting.

XII. Short Term Courses

After studying the lack of interest in obtaining NATA approval of short term courses and the minimal income obtained from the application forms, the Committee felt that NATA short term course approval procedures should be dropped from our Committee’s activities. This recommendation will be forwarded to the Board for approval.

XIII. Accreditation

After reviewing the most recent letters from Dr. Chambers representing COPA (see Appendix A), the Committee felt that we should continue to strive to obtain accreditation from COPA. However, at the same time, Sayers “Bud” Miller will investigate the possibilities of obtaining national recognition as an accrediting agency through the American Medical Association. In the meantime, we will continue to utilize our present approval procedures.

XIV. Program Director’s Role in Regards to Administering the Certification Examination

The Professional Education Committee discussed the role of the program director in administering the certification examination. It was agreed that program directors should not volunteer or be used in evaluating the oral/practical portion of the certification examination. However, program directors could organize the facilities and the administration of the exam if their school is selected as a site for offering the certification examination. This will help eliminate any criticism that program directors have knowledge of what is on the certification examination and are teaching their students according to the exam.

In further discussion, Jack explained that the district director is to report to him all of the officers in his or her district so that they may receive the appropriate continuing education units for their service. This must be reported each year and is also required to report their committee membership each year. Individual district officers and committee members will not be responsible for reporting this information.

XV. Continuing Education

Jack Redgren indicated that the NATA’s Mandatory Continuing Education Program had gone into effect on January 1, 1979, and in information about this program, especially the mechanics had been sent out to the certified membership. However, the Committee felt that this mailing would not suffice in reinforcing this program. Therefore, Jack will prepare an article to be published in the 1979 Spring issue of Athletic Training. In addition, he will also provide all Committee members with the appropriate materials so that each can take time at their meetings to explain the mechanics of the program and answer any questions.

In further discussion, Jack explained that the district directors are to report to him all of the officers in his or her district so that they may receive the appropriate continuing education units for their service. This must be reported each year and is also required to report their committee membership each year. Individual district officers and committee members will not be responsible for reporting this information.

XVI. Revision of Undergraduate and Graduate Curriculum Guidelines

In reviewing the Guidelines for Development and Implementation of NATA Approved Undergraduate Athletic Training Education Programs, the Professional Education Committee felt that the following revisions needed to be made in the guidelines in order to keep up with what is actually happening in the fields of athletic training education and physical education where most of our educational programs are housed:

A. Undergraduate athletic training education programs must
B. Undergraduate athletic training education programs must include
C. If the program is reapproved, then both the Membership Committee and Certification Committee should be specifically notified of the action taken. Since there will not be any graduates from the State of North Carolina program in 1979, this action will not be necessary for this program.

No other requests for NATA approval of other similar programs have been received. It is felt that the stringent NATA guidelines established for this type of educational program has discouraged anyone considering the implementation of anything but a quality high school faculty in-
are offering their students the opportunity to complete either a teaching degree or non-teaching degree since many of their students are not able to locate teaching positions and a greater emphasis is being placed upon community positions. Students enrolled in athletic training educational programs where the departments and colleges of health and physical education offer both teaching and non-teaching tracks may find themselves in a dilemma. A portion of these students will discover during their junior and senior year student teaching practicums that they do not want to transfer to another non-teaching track. These students, many very good athletic trainers, may graduate from the athletic training curriculum but not qualify to take the certification exam and drop by the way side. In California, all students desiring to obtain a teaching credential in any subject area must complete a five year after graduation. These students are not qualified to take the certification examination at graduation and not qualified to take an athletic training position. This rewriting of this section of the Guidelines will alleviate this problem.

B. Section II, Item C on page 15 entitled Program Director needs only the first sentence of the second paragraph revised. This revised sentence should read as follows:

The Program Director must be a member of the teaching faculty of the university as defined by the university sponsoring the program.

The previous sentence stated that the Program Director must hold the rank of instructor. This rank of instructor means many different things at the institutions across the nation. At some universities the rank of instructor is the start of the tenure track and the athletic trainer must meet the publication and research requirements of the school and may have had to obtain a doctorate degree within a required time limit. Since only a few certified athletic trainers hold a doctorate degree and have the time to carry out research, it would rule out this type of person if we want to place the Program Director in the position of Program Director. At other universities the rank of instructor would not qualify the Program Director to be a member of the teaching faculty. In this case, the Program Director has only a very little or no authority in administering and revising the educational program. He or she wouldn't have a vote on any item of business concerned with their program.

Revision of this sentence would require that the Program Director still be a member of the teaching faculty but within the definition of faculty rank established by the university.

C. Section II, Item G on page 19 entitled Clinical Experience - General Requirements only the second sentence of the first paragraph revised.

1. Present reading:

The undergraduate athletic training education program shall include a minimum of 600 clock hours of clinical experience under the direct supervision of a qualified instructor.

2. Proposed reading would only change the 600 clock hours to 800 clock hours.

3. Reasoning:

Most athletic training curriculums are already requiring at least 800 clock hours of clinical experience. Most of the program directors and the Professional Education Committee feel that the clinical experience requirement must be increased so that the students have adequate time to develop skill competencies.

XVII.

Revision of the Visitation and Revisitation Procedures and Guidelines

In an effort to reduce frequent duplication of effort and to alleviate the burden of preparing for visitations, which takes approximately one school year, both for the institution and the Professional Education Committee, the Committee felt that the schools offering both graduate and undergraduate educational programs in athletic training should have been reinspected for NATA approval combined into one visitation date for both programs. In this way the faculty and the athletic trainer would not have a double burden of preparing for visitations, which take approximately one school year, and the accreditation process should be developed in handling Committee proposals that are appropriate groups (school superintendents, school boards, P.T.A.'s, etc.) and appropriate groups (school superintendents, school boards, P.T.A.'s, etc.) which would address itself to the promotion of athletic trainers at the secondary level.

This group would develop the various models for establishing an athletic training educational program. The purpose of the interprofessional committee would be to serve as the basic elements of a comprehensive professional program.

The group would then seek out the best approaches of placing this promotional program before the public and other appropriate groups such as athletic directors, school principals, school boards, P.T.A.'s, etc., and have them present their concerns, questions, etc., about one or more of the schools to whom they are responsible. In any event, it would seem that a cooperative effort among interested professional groups would be a desirable way to go.

SUMMARY OF THE PROFESSIONAL EDUCATION COMMITTEE'S REQUESTS FOR ACTION TO BE TAKEN BY THE NATA BOARD OF DIRECTORS

JANUARY 1979

I. It is recommended that the Board of Directors approve the appointment of Leon Skeie to the Professional Education Committee as the District 9 representative for Gerald Bell.

II. It is recommended that the Board of Directors approve the appointment of Dan Foster to the Professional Education Committee as the District 5 representative to the Committee.

III. It is recommended that the Board of Directors approve the following correction of the minutes of the June, 1978 Board of Directors meetings as the approved in the Fall, 1978 issue of Athletic Training and have them printed in the very next issue of the NATA Journal:

A. The Professional Education Committee did not recommend that the athletic training educational programs offered by Western Illinois University, Indiana State University, and Indiana State University (Graduate level) be placed upon probation. The Committee recommended that these three programs be approved and granted approval for all three programs.

B. In listing the schools recommended by the Committee for approval and approved by the Board of Directors, the graduate program in Indiana University which actually was approved upon probation, was incorrectly listed in place of the graduate program offered by Indiana University.

IV. It is recommended that the Board of Directors reapprove the athletic training educational program at Central Michigan University for another five years becoming effective June 20, 1979, at the termination of the school's one year extension of its approval by the NATA.

V. It is recommended that the Board of Directors approve the athletic training educational program at the State University of New York at Brockport for two years becoming effective June 20, 1979.

VI. It is recommended that the Board of Directors approve the athletic training educational program at the University of Illinois for five years becoming effective January 20, 1979.

VII. It is recommended that the Board of Directors approve the athletic training educational program at Grand Valley State College for five years becoming effective January 20, 1979.

VIII. It is recommended that the Board of Directors remove the probationary status placed upon the athletic training educational programs at the Washington State University and Ball State University and approve all of these programs for five years becoming effective on June 20, 1979.

IX. It is recommended that the Board of Directors immediately take action of placing the athletic training educational programs at Western Illinois University, Indiana State University (Graduate level program), and Louisiana State University (Graduate level program) and all other programs for graduation and grant approval for all three programs effective June 15, 1978.

X. It is recommended that the Board of Directors reapprove the high school faculty instructional programs in athletic training programs at the University of Kentucky and the State University of North Carolina for five years becoming effective on June 20, 1979.

XI. It is recommended that the Board of Directors reapprove the high school faculty instructional programs in athletic training programs at the University of Kentucky and the State University of North Carolina for five years becoming effective on June 20, 1979.

XII. It is recommended that the Board of Directors approve the following revisions in the Guidelines for Development and Implementation of
XIII. It is recommended that the Board of Directors approve the combining of the evaluations of the graduate and undergraduate programs into one set of standards. There is a need to establish such standards so that the next visitation at each school will be carried out during the spring of the following year.

A. University of Oregon - 1981
B. Indiana State University - 1982
C. Indiana University - 1983

XIV. It is recommended that the Board of Directors, the Professional Education Committee, notify the Board of Directors of the schools seeking initial approval or reapproval by the NATA of their athletic training educational programs in their Midyear Report.

A. The Professional Education Committee will notify the Board of Directors of the schools seeking initial approval or reapproval by the NATA of their proposed educational programs in their Midyear Report.
B. The Board of Directors will notify the Professional Education Committee of its concerns, questions, etc., about one or more of the schools seeking NATA approval prior to the visitation of the school (approximately two months later).
C. The Professional Education Committee will carry out its evaluation of the schools seeking NATA approval before the visitation of the school (approximately March last).
D. The Professional Education Committee and the Board of Directors will evaluate the schools based upon the Committee's report and such other information as may be available. Any late developing concerns after the visitation is completed will be noted in the evaluation report.
E. The Board will notify the concerned schools of the reasons for the evaluation period. If the response is not satisfactory, the school could be placed upon probation even if their program had been approved three weeks prior to this action being taken.

IV. It is recommended that the Board of Directors approve the following education committee plan for improving educational programs and communication between the Committee and the Board of Directors in the approval of the educational training programs:

A. The Professional Education Committee proposes to initiate a plan for approval of the educational training programs by the Board of Directors.
B. Those proposals not accepted by the Board are returned to the Committee with the reasons for not being accepted. Sometimes the Board may accept more specific information of acceptance may have been a case of poor wording of an unclear explanation rather than a difference in philosophy.
C. If the proposal can be revised adequately, a more lucid explanation can be provided. The proposal will be returned to the Committee for further action.

XVI. It is recommended that the Board of Directors approve the Professional Education Committee's proposal for utilizing the American Academy of Orthopedics' grant of $16,000. This proposal calls for this sum of money to be used to finance an initial meeting of a "Task Force" comprised of representatives of the NATA and other appropriate committees, including the Professional Education Committee, Public Relations Committee, and other appropriate committees. The American Academy of Orthopedics is an appropriate group for such an educational program, high school principals, school superintendents, school boards, and P.T.A.'s. This proposal will be reviewed by the Board of Directors at the next meeting of the Board of Directors.

A. The Professional Education Committee will notify the Board of Directors of the schools seeking initial approval or reapproval by the NATA of their proposed educational programs.
B. The Board of Directors will notify the Professional Education Committee of its concerns, questions, etc., about one or more of the schools seeking NATA approval prior to the visitation of the school (approximately March last).
C. The Professional Education Committee will carry out its evaluation of the schools seeking NATA approval before the visitation of the school (approximately March last).
D. The Professional Education Committee and the Board of Directors will evaluate the schools based upon the Committee's report and such other information as may be available. Any late developing concerns after the visitation is completed will be noted in the evaluation report.
E. The Board will notify the concerned schools of the reasons for the evaluation period. If the response is not satisfactory, the school could be placed upon probation even if their program had been approved three weeks prior to this action being taken.

XVII. AMERICAN ACADEMY OF PEDIATRICS:

A. The Professional Education Committee, the Board of Directors, and the President will confer on the development of this paper. The Executive Committee of the Academy felt the most recent revision of the statement on growth and development was too lengthy to be just that. Dr. Shaffer extracted the essential ingredients from the introduction of the original and has titled it "Injuries to Young Athletes." This revised statement will be submitted to the Executive Committee for approval and will be recognized and developed as being developed for the NATA. The Paper will be reviewed by the Executive Committee and the Board for final action.

Cheerleading, when properly conducted, is part of the athletic scene. With the number of participants is the same safeguards as other athletic activities. These include proper conditioning, adequate practice area, competent coaching, proper equipment, and medical supervision. Miss Pauline Hess, President of the National Cheerleaders Association, was present to speak at local and national meetings of the present staff, including students. The Executive Committee of the Academy felt the most recent revision of the statement on growth and development was too lengthy to be just that. Dr. Shaffer extracted the essential ingredients from the introduction of the original and has titled it "Injuries to Young Athletes." This revised statement will be submitted to the Executive Committee for approval and will be recognized as being developed for the NATA. The Paper will be reviewed by the Executive Committee and the Board for final action.

In this regard, there has been ongoing correspondence between the Committee and the Schering Corporation regarding a symposium to be held at the Annual Meeting of the NATA. One of the proposals is that this symposium be held at the Annual Meeting of the NATA. One of the proposals is that this symposium be held at the Annual Meeting of the NATA. One of the proposals is that this symposium be published in a suitable journal for broad circulation with reprint distribution by the Academy members.
individuals and as a group. This caused them to be wary of full and open support at this time. The consensus was, after the members were polled, that the Committee would support the licensure efforts of the athletic trainer in those states where it seems appropriate. Two things seem apparent. The first is that the importance of developing contact with the state Chapter is emphasized. The second is that it would seem the Committee would have been more likely to take a strong position if it could have been demonstrated that the recommendation of the A.P.T.A. task force would be supportive of licensure for the athletic trainer. (Similar caution was evident in the proposal to establish liaison with the NASPE and with NOSCAE. The discussion centered around the possibility of potential liability in any action brought against either of these two organizations and its members. The Committee decided to refer this to the National office for action in the future.)

It is recommended that the N.A.T.A. continue liaison with the A.A.P., cooperate with joint projects, and seek increased support for our licensure efforts.

Respectfully submitted,
Richard F. Malozen, A.T.C.

ACTION
Moved by District 6, seconded by District 9 and carried that the report be accepted. Moved by District 8, seconded by District 10 and carried to continue liaison with A.A.P.

XXVIII. AMERICAN ALLIANCE FOR HEALTH, PHYSICAL EDUCATION AND RECREATION:

NATA Liaison Report

Since my last report, there has been very little activity concerned with the field of athletic training. One accomplishment has been the establishment of an athletic training column. The A.A.H.P.E.R.'s Journal with Sam Kegreess, A.T.C., West Virginia University, serving as the editor of this column. I would encourage the NATA membership to make contributions to this column.

The members of two of the training councils within the A.A.H.P.E.R. have not been accomplished. The N.S.P.E. Council (Joe Godke, Chief Officer) and NAGWS Council (Marge Albom, Chief Officer) have not met for more than a year. During late October, officers of the NAGWS and the NAGWS met in Washington, D.C. and discussed the athletic training councils and their future directions. I had requested that the two associations continue to work towards a joint athletic training council. In response to my request, I was told that my request was discussed and it was felt that the needs and concerns of women athletic trainers are different from male athletic trainers which required separate councils. They did mention that the two groups plan to pursue several joint projects together.

In a recent conversation with Joe Godke I discussed this matter with him. At that time he stated that he had not had any contact with the NAGWS Athletic Training Council or the officers of that council concerning future meetings or events. In his request that he had from Ross Merrick, the N.S.P.E. Executive Director, was to organize and develop an athletic training program to be presented at the A.A.H.P.E.R. National Convention. I have not been able to contact Marge Albom on this matter. I feel that the Board of Directors should request both Joe Godke, the N.S.P.E. representative on the N.S.P.E. Athletic Training Council, and Marge Albom, the NATA liaison to the NAGWS, report directly to the Board concerning the need for two athletic training councils in the A.A.H.P.E.R. since the needs and concerns of women athletic trainers are different from men athletic trainers if this matter is still a concern of the Board. In the past, the Board of Directors had indicated to me their concern over this matter.

Attached you will find a copy of a letter that I received from Ross Merrick concerning this matter.

SJM

ACTION
Moved by District 3, seconded by District 9 and carried that the report be accepted with a letter by the President to both Joe Godke and Marge Albom that they are to report directly to the Board concerning need for an athletic training program in the A.A.H.P.E.R.

X. AMERICAN COLLEGE HEALTH ASSOCIATION:

No report received, did not meet, will meet in April. No action required at this time.

XX. AMERICAN COLLEGE OF SPORTS MEDICINE:

Moved by District 8, seconded by District 9 and carried that the NATA continue its liaison with the ACSP.

The Board briefly discussed the proposed co-sponsorship by this organization with the NATA in 1980, with it being moved by District 3, seconded by District 6 and carried that Mr. John Kaney, the President of this group as the least obligations to be undergone by NATA in relation to this sponsorship and that a further report be made to the Board at its June meeting.

XXI. AMERICAN CORRECTIVE THERAPY ASSOCIATION:

Moved by District 3, seconded by District 9 and carried to disagree suggestion that members of the American Corrective Therapy Association would be welcome to all NATA meetings. By showing their membership card they would be required to pay only the registration fee of a member of the NATA. The same would be true for NATA members attending ACTA meetings.

Moved by District 9, seconded by District 2 and carried to continue relationship with the ACTA because of the common goals and problems of both organizations.

Moved by District 8, seconded by District 9 and carried that the President select someone to act as NATA representative to the July 1979 meeting of the ACTA.

XXII. AMERICAN PHYSICAL THERAPY ASSOCIATION:

Mr. Chambers called attention to his last update concerning the activities of this group. He is considering meeting to be held at San Francisco, indicating that as soon as this meeting had been held that a further report would be prepared and submitted. Attention was likewise called to the liaison report of Mr. Frank George of June 1979, with it being moved by District 2, seconded by District 9 and carried that the report be accepted.

XXIII. JOINT COMMISSION ON COMPETITIVE SAFEGUARDS AND MEDICAL ASPECTS OF SPORTS:

Attention was called to the Las Vegas and San Francisco reports. Moved by District 4, seconded by District 9 to accept the Las Vegas report. Motion carried.

Moved by District 10, seconded by District 2 to accept the San Francisco report. Motion carried.

Copies of these two reports can be obtained by writing to Mr. Roy Don Wilson, Athletic Department University of Southernwestern Louisiana Lafayette, Indiana 70504

XXIV. NATIONAL ASSOCIATION FOR GIRLS AND WOMEN IN SPORTS:

Moved by District 5, seconded by District 6 and carried that the Board reject the request for a thousand dollars or adequate computer time in relation to analysis of a survey developed by the Athletic Training Council of this organization.

XXV. NATIONAL ASSOCIATION OF COLLEGE DIRECTORS OF ATHLETICS:

Mr. Davis indicated that the annual meeting of this group had been held in June of 1978 and that the NATA had no representation. It was moved by District 4, seconded by District 8 and carried that Mr. Young be approved as liaison to this group.

XXVI. NATIONAL ASSOCIATION OF INTERCOLLEGIATE ATHLETICS:

No formal report submitted as the group will meet later in the year.

XXVII. NATIONAL COLLEGIATE ATHLETIC ASSOCIATION FOOTBALL RULES COMMITTEE:

Attention was called to the preliminary report of Warren Morris, with the Board, by official action, then accepting the report as information.

XXVIII. NATIONAL FEDERATION OF STATE HIGH SCHOOL ASSOCIATIONS:

Attention was called to the open letter to Sports Illustrated and the data concerning the 1978-79 National Federation States Participation Survey. There being no report for consideration the board then continued with other agenda items.

XXIX. NATIONAL HEAD AND NECK INJURY REGISTRY:

Attention was called to the letter from Dr. Torg requesting continuance of NATA participation. Moved by District 8, seconded by District 4 and carried that NATA continue its participation with this group.

XXX. NATIONAL OPERATING COMMITTEE ON STANDARDS FOR ATHLETIC EQUIPMENT (NOSCAE):

Attention was called to the list of approved helmets as released and the letter from Ross Merrick, NATA representative to this group. There being no specific requests, it was moved by District 1, seconded by District 4 and carried that the report be accepted.

XXXI. UNITED STATES OLYMPIC COMMITTEE:

A lengthy discussion concerning the present frustrations and state of events concerning the USOC ensued, with the following actions then being approved:

Moved by District 9, seconded by District 8 to suspend application of Article 18 of the Bylaws until June, pending formal action, this suspension to become effective February 4, 1979. Motion carried.

Moved by District 8, seconded by District 9 that application of Section 4 of the Code of Ethics be suspended until June, pending formal action, this to be effective as of February 4, 1979. Motion carried.

Moved by District 9, seconded by District 8 and carried that Pan Am and Olympic Policy No. 3 be suspended until June pending formal action, this action likewise to be effective February 4, 1979.

XXXII. COMMENT ON ARTICLE BY DR. MARSHALL:

The material as furnished was accepted as information by the Board, with no comment being indicated.

XXXIII. SPORTS SAFETY AND HEALTH CARE SOCIETY:

Upon recommendation of Mr. Miller, it was moved by District 4, seconded by District 7 and carried to continue liaisons activity with this society, with District 2 abstaining from voting.

XXXIV. REQUEST TO SELL SHIRTS AT CONVENTION:

Following a brief discussion concerning this request, it was moved by District 4, seconded by District 2 and carried to deny the request to sell T-shirts at the convention with District 8 abstaining from voting.

XXXV. ACE'S COMMISSION ON COLLEGIATE ATHLETICS:

Moved by District 9, seconded by District 8 that the NATA continue to send a certified trainer to the council's meetings when requested. Motion carried.

XXXVI. NATIONAL GYMNASTICS CATASTROPHIC INJURY STUDY REPORT:

Moved by District 4, seconded by District 9 and carried that the NATA does not, at this time, wish to be a co-sponsor in this project because of it not being clear in the minds of the Board as to which direction the study is proceeding and the Board is not certain of the objectives and involvement of the Nissim Company.

XXXVII. PROPOSAL FOR MANAGEMENT AND ACCOUNTING SERVICES FOR NATA:

Attention was called to this proposal of offering management and accounting services to the NATA for the sum of $125 per month. Following discussion by Mr. Davis as to the advantages of this service, it was moved by District 5, seconded by District 9 and carried to accept the proposal with District 2 abstaining from voting.

XXXVIII. CLEARING HOUSE FOR INFORMATION TO WOMEN INTERESTED IN ATHLETIC TRAINING:

Moved by District 4, seconded by District 9 and carried that Marge Albom act as the clearing person in relation to women interested in athletic training, with Districts 2, 7 and 8 abstaining from voting.

XXXIX. CONSTITUTIONAL CHANGES:

Moved by District 3, seconded by District 8 and carried that the proposed constitutional changes be accepted for presentation to the membership as per the present guidelines. There being no further business, at 1:50 clock a.m., the meeting was adjourned sine die.

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