AMERICA'S BEST LOOKING KNEES ARE WEARING PRO KNEE SLEEVES.

From pro athletes with patellar problems to Sunday joggers with simple knee strains . . . more and more people are looking better, and performing better, with PRO knee sleeves and braces.

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Based on the time tested design of our classic model 110 knee sleeve, we’ve taken the next step in intermediate patellar stabilization. A channel around the patellar opening holds a soft rubber stabilizer which can be tailored for individual fit and comfort. The result, a new approach to an old problem.

Give us a call with your problem. Use our TOLL FREE phone number to talk to a PRO staff member today. We’re sure we have the right sleeve for the right problem.

And we’ll make you look good, too.

Our new catalog of over 50 Neoprene orthopedic products is yours for the asking. Write or call TOLL FREE today. 1-800/523-5611.
KINETRON II gets your injured athletes back into action faster

Now, post-surgical lower limb rehabilitation and fast functional speed exercise can begin earlier with KINETRON II.

**Controlled Weightbearing and Range of Motion**

KINETRON II exercise can begin as soon as some weightbearing is permitted. A prescribed percentage of weightbearing is set by the clinician and easily maintained by the patient. Where flexion and extension must be limited, KINETRON II adjustments give the clinician complete control over hip, knee and ankle range of motion.

**Controlled Speed**

KINETRON II resistance is Isokinetic — the speed of motion is constant and controlled. This allows the patient to develop fully supported weightbearing force, and ultimately to exercise at fast functional speeds. KINETRON II exercise improves power capacity as the patient develops force more quickly at higher speeds.

**End-Loaded Accommodating Resistance**

Injuries such as anterior cruciate ligament and Achilles tendon tears, or patellofemoral problems, are effectively rehabilitated with KINETRON II exercise. The end-loaded compressive resistance pattern maintains bone density and provides functional exercise. Resistance accommodates perfectly to patient force output, virtually eliminating the risk of overstressing damaged structures while safely restoring total leg strength.

**High-Strength Construction**

The welded steel frame construction and the Isokinetic resistance mechanism of KINETRON II are specifically designed to withstand the high forces produced by repeated intense exercise bouts. The high-force gauge provides readouts of up to 350 lbs. and gives motivational feedback of improved performance.

KINETRON II... for the only Isokinetic end-loaded resistance exercise that develops total leg strength and power capacity at any level of prescribed weightbearing.
ATHLETIC TRAINING

THE JOURNAL OF
THE NATIONAL ATHLETIC TRAINERS ASSOCIATION, INC.

Volume 21, Number 3, Fall 1986

Features

200
Knee Rehabilitation Following Anterior Cruciate Ligament Injury or Surgery
BERNARD F. DEPALMA, ME, RPT, ATC

207
Concussion Injury in College Football-An Eight-Year Overview
W. E. BUCKLEY, PhD

212
An Athletic Training Program in the Computer Age
RICHARD RAY, ATC

215
A National Survey of Employment Opportunities for Athletic Trainers in the Public Schools
WILLIAM E. PRENTICE, PhD, ATC, LPT

220
Self Concept and Injury Frequency Among Female College Field Hockey Players
MARYBETH LAMB, MS, ATC

225
The Athletic Trainer's Role in Drug Testing
NATHANIEL E. P. EHRLICH, ESQUIRE (ATC)

227
Hyperextension Taping for Soccer Goalies
LEIGH ANN DINKLER, LAT, ATC

228
Alternative to Shoulder Girdle Protection
DAVE CARRIER, MA, ATC

235
Isolated Posterior Cruciate Tear in a Collegiate Football Player
ROBERT J. SAUERS, MD, ATC

Departments

233 Announcements

238 Association Activities

245 Calendar of Events

265 Committee Forum

259 Current Literature

230 Editor-in-Chief Comments

198 Guide to Contributors

262 Historical Flashbacks

In This Issue

278 Proceedings of the Board of Directors, Summary of Actions

288 Proceedings of the Annual Business Meeting
Journal Deadlines

In order to avoid confusion and delays on contributions to the Journal, the deadlines for various sections are provided below.

The Editorial Board will review papers submitted on an individual basis, working with the authors to prepare the papers for publication.

The deadlines are:

- **Journal**: Spring Issue Deadline: December 15; Summer Issue Deadline: March 1; Fall Issue Deadline: June 15; Winter Issue Deadline: September 15

**Send manuscripts and “Case Reports” to:**
- Ken Knight, ATC
- Student Health Center
- Indiana State University
- Indiana 47929

**Information on upcoming events for the “Calendar of Events” section should be sent to:**
- Jeff Fair, ATC
- Athletic Department
- Oklahoma State University
- Stillwater, OK 74074
- “Tips From the Field” and “New Products” should be sent to:
- Barrie Steele
- Mid Sussex Physicians
- Mobile, AL 36601-0250

**Send material for “Announcements”, “Letters to the Editor” and miscellaneous items to:**
- Steve Yates, Editor-in-Chief
- P.O. Box 7265
- Sports Medicine Unit
- P.O. Box 250
- U.S. Sports Academy
- Stillwater, OK 74074
- PO Box 250
- Mobile, AL 36601-0250

**The following recommendations are offered to those submitting CASE REPORTS:**

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

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

**The following recommendations are offered to those submitting material to be considered for TIPS FROM THE FIELD:**

1. The above recommendations for submitting CASE REPORTS apply to Tips From the Field.
2. Copy should be typewritten, brief, concise, in the first or third person, and using high quality illustrations and/or black and white glossy prints.

**The following guidelines must be met for submission of papers or material to the “STUDENT TRAINER CORNER.”**

1. Author must be a student member of NATA
2. Topics must relate to athletic training; case reports, experimental reports, suggestions, new ideas, tips, and/or specifics for a given problem
3. Articles should be no more than 2 to 3 pages in length, double spaced.
Dear Members:

What a thrill it is to be able to represent this Association. I look forward to these next years as a challenging, yet rewarding period.

I know you join me in thanking Dr. Bobby Barton for the four years he served the NATA as our president. The great strides we made under his leadership will long be remembered as a period of tremendous growth spurt. Those of us fortunate enough to have been in Las Vegas for our Annual Meeting and Clinical Symposium owe Janice Daniels and District 8, Jerry Koloskie and his convention staff, and of course Fred Hoover and his national convention committee, a large vote of thanks. Of course so many more than these mentioned did so much to make this meeting a success.

At the Mid-Winter Meeting your Board of Directors will be presenting proposals for a possible site change for our NATA home office. Your director has been in contact with your District to make proposals from your District. The discussion in February will be on those sites that your Districts bring. If you are interested, now is the time to get busy.

We as an Association have so many people to thank for their support and in turn we need to support them. As always our exhibitors and their exhibits were outstanding in Las Vegas.

John LeGear, our public relations representative, will be calling on many of you in the next few months to help carry our message to America. We should all be proud to have the opportunity to promote our own.

Support your District Director. We have four new Directors as well as a new president. We all need your support and input. Let us know what you think.

Keep in touch.

Sincerely,

Jerry Rhea
President
A rehabilitation program following severe knee ligament injury and/or surgery, especially that of the anterior cruciate ligament, is discussed. Concepts are based on research, practical experience, and strength and power lifting principles. Control of forces is used during all twelve phases and months based on the data from an In-Vivo Strain Gauge Study performed by Henning, Lynch and Glick on the anterior cruciate ligament. They provided information necessary to structure a rehabilitation program while minimizing the forces placed upon the repaired or reconstructed anterior cruciate ligament. Protecting the ligament from these forces during rehabilitation is vital to a successful post-operative result.

The goal of this paper is to describe a sound rehabilitation program following severe knee ligament injury and/or surgery, especially that of the anterior cruciate ligament. The concepts described can be used for all knee rehabilitation in general with a shortening of the time sequence for less serious injuries and surgical procedures.

In our experience, twelve or more months of rehabilitation after primary repair of the anterior cruciate ligament is an important factor in a successful return to participation in running and jumping sports, at a level equal to pre-injury participation. In fact, the will and motivation to carry out this rehabilitation may be a significant variable in deciding whether or not to repair the ligament. If a successful program is not available, the function of the involved extremity may be significantly impaired even though the repair may be successful.

The rehabilitation program described has been used for four years, with a 100% success and return to participation rate. Athletes were protectively braced for the first year back in sports, but thereafter discontinued protective bracing. The majority preferred not to wear a brace as they found it unnecessary after rehabilitation.

Review of Literature

Review of literature concerning knee ligament injury and/or surgery reveals that a carefully supervised and structured post-operative rehabilitation program is rarely emphasized or described, especially following isolated anterior cruciate ligament repair or reconstruction. Paulos et al (5) have presented much of the available material.

Phases of Rehabilitation

Our program is divided into twelve phases. Goals of the program are full flexion, full extension with no hyperextension, affected leg hamstring strength and power greater than affected leg quadriceps strength and power, and unaffected leg hamstring strength and power.

Phase I, 0-6 Weeks

In the first phase, while casted, no motion has generally been allowed for the first six weeks. If a hinged brace, rather than a cast, is used in the first six...
weeks, controlled active range of motion (20°-60°) is performed, while controlling forces to protect the ligament as described by Paulos (5).

Phase II starts upon removal of the cast or brace. Depending upon the amount of active swelling and wound healing, whirlpool or ice is used with active range of motion exercises. Whirlpool is used for twenty minutes and the patient is instructed to slowly flex and extend the knee within a painfree range. At the extremes of both flexion and extension, the patient is told to isometrically contract the hamstring and quadriceps. If active swelling is still present, ice is used for twenty minutes. During the last ten minutes of icing the patient is instructed to flex and extend the knee as described in the whirlpool.

Crutch-walking is very important in this phase. Crutch-walking with approximately fifty pounds of weight bearing on the affected leg produces only 7% elongation of that produced by an eighty pound Lachman test (3). It is used to teach normal gait patterns and develop muscular control of the hamstrings, quadriceps and calf muscles (5). Heel strike with knee extension and pushoff with knee flexion are encouraged. We differ from Paulos in that we discourage use of a brace during rehabilitation after this phase. We feel that the patient's psychology becomes dependent upon the brace and place their confidence in it rather than their knee. A well designed program that protects the repaired anterior cruciate ligament is started as early as possible. The patient is asked to hold the contraction for six to ten seconds with a five second rest between. This is repeated throughout the day for at least one hundred repetitions.

The second exercise is straight leg raises without weights. These are performed lying supine, keeping the affected leg locked in as much extension as possible by performing a quadriceps set. Fifty repetitions are done in the morning and fifty at night. These can be broken down into sets and repetitions.

The third, fourth, and fifth exercises consist of hip abduction while lying on the unaffected side, hip adduction lying on the affected side, and hip extension lying prone. These are all done as the straight leg raises with fifty repetitions twice a day.

The sixth exercise consists of calf exercises using Theraband™ or elastic tubing. Four sets, ten repetitions each, of active resistive dorsiflexion, planter flexion, inversion, and eversion exercises are performed. The gastrocnemius, crossing the knee joint posteriorly, adds to the stability of the knee and helps protect the repaired anterior cruciate ligament.

The seventh and last exercise in Phase I involves the unaffected leg. Nautilus, Orthotron, Universal Gym and/or an NK table are utilized. This is encouraged to maintain good quadriceps and hamstring strength and power. Possibly, there is also a carry-over effect to the affected leg.

Phase II, 6-8 Weeks
Phase II starts upon removal of the cast or brace. Depending upon the amount of active swelling and wound healing, whirlpool or ice is used with active range of motion exercises. Whirlpool is used for twenty minutes and the patient is instructed to slowly flex and extend the knee within a painfree range. At the extremes of both flexion and extension, the patient is told to isometrically contract the hamstring and quadriceps. If active swelling is still present, ice is used for twenty minutes. During the last ten minutes of icing the patient is instructed to flex and extend the knee as described in the whirlpool.

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Phase III, 8-12 Weeks
Phase III starts with a re-education of Phases I and II. The patient is again instructed in Phase I and II exercises for home use. These are decreased from seven to five days per week. The patient's program, at this point, will include two days of rest per week, with normal crutch ambulation emphasized at all times.

Whirlpool and/or ice is continued as a warmup, with active range of motion exercises. The patient then starts hamstring isotonics, preferably using an NK table which allows maximal torques within the limits of the patient's range of motion. A progressive resistive exercise (PRE) program is started using a modified DeLorme program (2). The patient's ten repetition maximum (10 RM) is found. The first set is ten repetitions at one-half the 10 RM. The second set is ten repetitions at three-fourths the 10 RM. The third set is ten repetitions at 10 RM. A fourth set is added which consists of the 10 RM plus five pounds, with as many repetitions as the patient can produce painfree. As soon as the patient can produce ten repetitions on the fourth set, the amount of weight increases in each set by two and a half to five pounds. Hamstring isotonics are done in this fashion three days per week, preferably every other day.

The second addition to this phase is swimming. The patient is instructed in swimming for time, dependent, of course, upon the patient's past physical condition and swimming ability. They are shown how to stabilize the knee using the hamstrings and quadriceps. Forced kicking is not allowed in order to prevent forces from water resistance affecting stresses on the anterior cruciate ligament. Swimming is performed two days per week, preferably on the off lifting days. Crutch-walking is continued, concentrating on push-off with available knee flexion, using the hamstrings and calf muscles. At the end of each workout, ice is applied for 15-20 minutes, in an attempt to alleviate post-exercise swelling or effusion.

Phase IV, 12-14 Weeks
Phase IV starts with crutch-weening. The patient is instructed in normal ambulation-gait without crutches. By this time, good hamstrings and calf control is essential for determining when the crutches can be eliminated. Ambulating on a level floor produces a load of 36% of the eighty pounds necessary to produce a Lachman test (3).

The second and last exercise in this phase is done on the swimming days (twice per week). It consists of stationary bicycling, but is performed only if the patient has 80° to 95° of knee flexion. This is the amount of knee flexion we determined needed to produce a smooth, painfree cycling pattern. Stationary cycling produces 7% elongation (3).

Up to this point, the patient has had Phases I and II to perform at home (Table 1), plus Phases III and IV (Table 2). The elimination of a brace is discussed with the
Phase V, 14-24 Weeks

Phase V starts with the addition of toe raises off a step, using one foot at a time (Table 3). Four sets of twenty repetitions each is encouraged as a goal. These are performed three days per week, preferably on the same days as the hamstring isotonics. By this time, the patient should have almost full extension (within 3° to 5°) of the affected knee. In approaching full extension it is important to avoid forced hyperextension as this will add to the elongation of the anterior cruciate ligament.

The second exercise in this phase depends upon available equipment. The Orthotron (isokinetics) is started three days per week, on the same days as the hamstring isotonics. The unaffected leg is worked at a power-speed setting of seven up and seven down, (or whatever is preferred) for four sets of ten repetitions. The affected leg is worked at a power-speed setting of ten up and three down, for four sets of ten repetitions. The patient is instructed to bring the bar up with no forced kicking, then explode into flexion through a full range of motion. No active resistive extensions will be added until later phases. Hamstring progressive resistive exercises produced a minus 7% elongation of that produced by an eighty pound Lachman test (3).

Phase VI, 18-24 Weeks

Phase VI, the mid-point of the program, again begins with re-education. The first five phases are reviewed as to sets, repetitions, and number of days per week to be performed. Rest periods are also encouraged. A week or two off at this time helps prevent mental and physical burnout.

The first addition to Phase VI is the leg press exercise performed on Nautilus or Universal Gym (Table 4). Leg presses are done before active resistive extensions because they produce 21% elongation of that produced by an eighty pound Lachman test. (3). This 21% elongation is significantly less than the 50% elongation produced by active resistive extensions with a twenty pound weight. We believe the low elongation percentage of the leg presses is due to the decreased lever arm as compared to extensions. The decreased lever arm decreases the torque at the knee joint, thus decreasing torque on the anterior cruciate ligament. The forces at the knee while using the leg press are pushing in the direction down through the shaft of the tibia to the foot. The forces at the knee while active resistive extensions are performed are pushing the tibia forward on the femur. The patient is instructed in four sets of ten repetitions, using the modified DeLorme (2) workout discussed earlier. These are performed two days weekly, on two of the same days as the hamstring isotonics and Orthotron. We want to work the legs resistively on the same days and use the off days for swimming, cycling and rest.

The second step in this phase is the addition of Nautilus or Universal hamstring exercises, again to be performed on the same days as the Orthotron and NK table. Each leg is exercised individually, using a light weight to fatigue the hamstrings. If Nautilus is available, the hip and low back and the hip abduction-adduction machines are added. One to three sets of 12 to 15 repetitions can be used.

At the end of the 24-week period, the patient can start straight ahead jogging, if painfree. Normal running gait pattern is reviewed and the patient is instructed in a progressive jogging program. Either the time or distance variable can be used, with a progression of one-half mile for two weeks, adding one-half mile every two weeks until the goal is reached. Jogging is done twice weekly on the same days as swimming and cycling. As the jogging distance or time increases, swimming and cycling decrease. Jogging produces a 61% elongation of that produced by an eighty pound Lachman test (3). As an addition to the leg press, the patient can start side step-ups. They start at a six inch height for three to four weeks, twice weekly, increasing to a 12-inch step height. Either time, or sets and repetitions can be used as a variable.

Phase VII, 24-30 Weeks

No new exercises are added in Phase VII. We use this time to re-educate and re-evaluate the patient and set new goals. The program is re-outlined as to days, sets and repetitions, performance is re-evaluated, and new goals are set. New 10 RM's are determined for the NK table, Nautilus leg press and leg curl.

Phase VIII, 30-36 Weeks

This phase begins with the education of power squats (Table 5). The addition of power lifting to our rehabilitation program has been extremely beneficial to our athletes upon their return to athletics. It is imperative that proper squatting technique is taught. Instruction by a strength coach or trainer knowledgeable in power lifting is advised. A good source of information, in this regard, is found in the June-July 1984 issue of the National Strength and Conditioning Association Journal (1).

This article describes the squat as the best exercise for development of the quadriceps for the demands of ground-based sports. McLaughlin (1) explains the quadriceps' role in running and how they decelerate the legs and absorb the forces of impact with the ground. He goes on to describe how weak quadriceps contribute to knee injuries in sports because of their inability to effectively decelerate the legs, and thereby the body itself.

"Using substitute exercises like leg extensions, typically does not contribute to the development of this important muscle capacity. In leg extensions, most athletes only concentrate on the upward action and typically relax during eccentric phase of movement, using little deceleration. In contrast, when performing squats, it is difficult to relax during the descent (unless you are crazy or have no intent to come up!) and consequently, excellent deceleration (eccentric) training is provided." (1)

Also discussed is the neural training that occurs as a result of the balance, timing, coordination, and activation demands of large muscle numbers. The transfer takes place biomechanically to jumping, running, etc. (1).

Increasing total leg strength is as important in rehabilitation as it is before an injury occurs. The building of strength is one of the main factors for knee protection. All involved in athletic performance will agree that the squat is the most important exercise for developing functional strength (1,4). "From a physiological standpoint there is no alternative exercise to the squat as far as its potential for stimulating total body
### Phase I, 0-6 Weeks
1. Quadriceps sets
2. Straight leg raises without weights
3. Hip abduction
4. Hip adduction
5. Hip extension
6. Theraband™ or elastic tubing for calf
7. Nautilus and/or Orthotron for unaffected leg

### Phase II, 6-8 Weeks
8. Whirlpool and/or ice with active range of motion
9. Continue crutch walking
10. Hamstring isometrics

### Phase III, 8-12 Weeks
11. Hamstring isotonics
12. Swimming
13. Continue crutch walking

### Phase IV, 12-14 Weeks
14. Stop crutches if applicable
15. Stationary cycling

### Phase V, 14-18 Weeks
16. Toe raises
17. Start Orthotron

### Phase VI, 18-24 Weeks
18. Leg press machine
19. Nautilus
   1. Hamstring
   2. Hip and low back machine
   3. Abduction and adduction machine
20. Begin straight ahead jogging at end of phase
21. Side step-ups

### Phase VII, 30-36 Weeks
22. Free weight power squats

### Phases IX and X, 36-40 Weeks, 40-44 Weeks
23. Orthotron changed to 7 up and 7 down
24. Start straight ahead strides
25. Start rope jumping

### Phases XI, 44-48 Weeks
26. Isotonic leg extensions
27. Start straight ahead sprinting and zig-zag running

### Phases XII, 48-52 Weeks
28. Figure 8’s and agility running
29. Mental imagery

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**Table 1**

<table>
<thead>
<tr>
<th>Phase I, 0-6 Weeks</th>
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<tbody>
<tr>
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<td>3. Hip abduction</td>
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**Table 2**

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<th>Phase II, 6-8 Weeks</th>
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<tr>
<td>8. Whirlpool and/or ice with active range of motion</td>
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<tr>
<td>9. Continue crutch walking</td>
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**Table 3**

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<th>Phase III, 8-12 Weeks</th>
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<td>11. Hamstring isotonics</td>
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<td>12. Swimming</td>
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<td>13. Continue crutch walking</td>
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**Table 4**

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<td>14. Stop crutches if applicable</td>
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<td>15. Stationary cycling</td>
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**Table 5**

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<td>22. Free weight power squats</td>
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**Table 6**

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**Table 7**

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<tr>
<td>26. Isotonic leg extensions</td>
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<td>27. Start straight ahead sprinting and zig-zag running</td>
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**Table 8**

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<td>28. Figure 8’s and agility running</td>
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Growth and development. The squat has additional benefits in training the quadriceps to handle the high loads and rapid loading rates typical of most ground-based sports. (1) This article positively reinforces the use of squats and we highly recommend reading and understanding it before using the squat as a rehabilitative exercise.

A free weight room is utilized and the patient is instructed in the techniques of power squats and training squats. Our choice is the power squat because in addition to quadriceps strength and power it also emphasizes hip, gluteal and hamstring strength and power. The training squat tends to emphasize the quadriceps. For power squats, a wide stance is used, legs more than shoulders' width apart, with feet pointing outward at approximately 30° to 45° angles. The knees should remain over the foot at all times during the squat. The bar is placed as low as possible on the upper back (on the scapulae), so as to bear the weight and forces over the hips, gluteals and hamstrings rather than over the quadriceps and knees. A thigh-parallel power squat is performed, concentrating on technique (4), controlled eccentric movement, and an exploding concentric movement. The depth of the squat should not be below the thigh-parallel position in order to protect the collateral and anterior cruciate ligaments. For the first two to three weeks of the squatting program, technique is emphasized. After the third week, weight can be added to find the patient's 10 RM. The modified DeLorme (2) program is used twice weekly with at least two days off between workouts and on the same days as the leg press but performed before the leg press. At this point, the leg press is decreased to one to three sets of ten repetitions. This is done for four to six weeks. After the sixth week, the patient can progress to normal set and repetition routine for power squats. Again, reference to the June-July 1984 issue of the National Strength and Conditioning Association Journal (1) will help in developing a squatting program. The reason for performing the squat before the leg press on a daily basis, is to emphasize free weight control and neural development, and to regain confidence. The squat is your primary lift, the leg press is complementary. A power squat to thigh-parallel produces a 21% elongation of that produced by an eighty pound Lachman test (3). Another vital aspect of any conditioning or rehabilitation program is proper stretching. When using free weights, proper stretching and flexibility are especially important, concentrating on the low back, hamstrings, groin, quadriceps, and calf area.

**Phases IX and X, 36-40 Weeks, 40-44 Weeks**

Phases IX and X are progressive phases for the power squat, hamstring isotonics and isokinetics, leg press, and toe raises. Goals are reassessed and a realistic outlook is formed regarding the patient's confidence and prognosis for return to athletics. The use of free weight power squats, and the addition of dead lifts after the twelfth month, has greatly increased our patients' confidence in their injured knees for athletic competition and has been the deciding factor in eliminating a brace during competition.

The beginning of Phase IX starts with a change in the Orthotron workout (Table 6). The speeds are changed to seven up and seven down, the exercise remains four sets of ten repetitions three days per week. This is the first time that the patient is asked to perform active resistive or isokinetic knee extensions. Also at this time, the patient is started on straight ahead running, strides at approximately three-fourth speed, painfree, two to three
days per week. Strides are performed on the same days as squats. Our heavy leg days (squats, press, hamstrings, Orthotron and strides) are performed twice weekly. Light leg days (jogging, swimming, cycling, side step-ups, rope jumping and a third day of Orthotron and hamstrings) are performed three days per week. We will encourage a two day per week rest period.

**Phase XI, 44-48 Weeks**

Phase XI begins with isotonic knee extensions either on Nautilus or Universal (Table 7). These are performed twice weekly as complementary lifts to the squats. A light weight is used and one to three sets of ten repetitions are performed.

Straight ahead sprinting and zig-zag running are started, painfree, twice weekly on the heavy leg days. A brace could be worn at this time for the zig-zag running until the patient develops the confidence he needs. By this time in the program, straight ahead sprinting and zig-zag running will be very easy for the patient due to the time spent gaining confidence, strength, power, coordination, and endurance from the power squats.

**Phase XII, 48-52 Weeks**

Phase XII starts with figure eight and agility running specific to the patient’s sport (Table 8). These are done on either the heavy or light leg days. The six athletes who have used this program during the past three years, have been timed in the 40-yard sprint at this phase. Their times have either equaled or bettered their best pre-injury 40-yard time. This has been a great confidence builder. Also at this time, the patient can start mental imagery during agility drills. While testing the knee, the patient should visualize himself in game competition performing at a high level.

After Phase XII an in-season maintenance program is used consisting of power squats and Orthotron, twice weekly on the same days. Light hamstring PRE can also be included on the same two days as the squats and Orthotron.

**Summary**

Although many programs have been used to rehabilitate the knee ligament injury, the current literature is very sparse regarding the specifics of such programs. The rehabilitation program we have described for the anterior cruciate ligament injury is based on research (3,5), practical application, and strength and power lifting principles (1,4). It has been used for four years with great success.

**References**


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ANSWERS TO PREVIOUS CEU CREDIT QUIZ

“Psychology of the Injured Athlete”

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204 Athletic Training • Fall 1986
CEU Credit Quiz

KNEE REHABILITATION FOLLOWING ANTERIOR CRUCIATE LIGAMENT INJURY OR SURGERY

Bernard F. DePalma, MEd, RPT, ATC
Russell R. Zelko, MD

As an organization accredited for continuing medical education, the Hahnemann Medical College and Hospital certifies that this continuing education offering meets the criteria for .3 hours of prescribed CEU credit in the program of the National Athletic Trainers’ Association, Inc., provided the test is used and completed as designed.

To participate in this program, read the material carefully and answer the questions in the test. Mark the answers you select by placing an X in the proper square. Then tear out the test sheet, fill in your name, address and other information, and mail with $12 for processing to: Hahnemann University, School of Continuing Education, Broad and Vine, Philadelphia, PA 19102.

The NATA National Office will be notified of all members with passing scores over 70%. CEU credit will be issued to each member’s record at that time. Participation is confidential.

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<tr>
<td>1. During phase I rehabilitation exercises involving is/are performed.</td>
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<td>1. isometric quadriceps setting</td>
<td>a. 1,2,3</td>
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<td>2. straight leg raises without weights</td>
<td>b. 1,3</td>
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<td>3. hip abduction while lying on the unaffected side</td>
<td>c. 2,4</td>
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<td>4. calf exercises</td>
<td>d. 4 only</td>
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<td>e. 1,2,3,4</td>
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<td>2. The use of equipment such as Nautilus by the unaffected leg is encouraged in phase I rehabilitation.</td>
<td>a. true</td>
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<td>b. false</td>
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<td>3. Which of the following may be used with active range of motion exercises during phase II rehabilitation?</td>
<td>a. whirlpool</td>
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<td>b. ice</td>
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<td>c. both a and b above</td>
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<td>d. none of the above</td>
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<td>4. During phase II rehabilitation emphasis is placed upon</td>
<td>a. calf strengthening.</td>
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<td>b. quadriceps exercises.</td>
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<td>c. hamstring muscle strengthening.</td>
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<td>d. b and c above</td>
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<td>5. During phase III rehabilitation</td>
<td>a. hamstring isotonics using a progressive resistive exercise program are done three days/week.</td>
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<td>b. swimming with forced kicking is started.</td>
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<td>c. crutch-weening is started.</td>
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<td>d. a and b above</td>
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<td>e. all of the above</td>
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<td>6. Stationary bicycling can be performed by the rehabilitation patient if he/she has at least 60° of knee flexion.</td>
<td>a. true</td>
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<td>b. false</td>
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### Questions

7. During phase VI rehabilitation, leg press exercise on Nautilus or Universal Gym should be performed _______ active resistive extensions.
   - a. after
   - b. before

8. The most important exercise for developing functional strength for athletic performance is
   - a. leg press exercise.
   - b. leg extension.
   - c. hamstring isotonics
   - d. the squat.

9. In the rehabilitation process, proper stretching should be emphasized, concentrating on the
   - 1. low back.
   - 2. groin.
   - 3. quadriceps.
   - 4. calf.

   a. 1,2,3  
   b. 1,3  
   c. 2,4  
   d. 4 only  
   e. 1,2,3,4

10. Toward the end of the rehabilitation process, the athlete can start doing
    - a. straight ahead running.
    - b. zig-zag running.
    - c. both a and b above
    - d. none of the above

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(Make copies of this page.)
Concussion Injury in College Football
An Eight-Year Overview

W. E. Buckley, PhD

The purpose of this investigation is to review the nature and extent of concussion injuries in college football using the National Athletic Injury/Illness Reporting System (NAIRS) data set. Basic univariate or tabular analysis techniques were used to interpret the data. There were an average of 49 college teams that contributed injury information relative to concussion injury over the eight-year study period (1975-1982). This represented over 36,000 athlete-seasons and 395 team seasons. Particular variables studied included team (position), activity, and situation.

It was found that concussion injury was a relatively infrequent but persistent type of injury in college football during the eight-year period. Comparison of injury rates demonstrated nine times as much risk for game as for practice sessions with the vast majority of these considered MINOR according to a less than seven day time-loss criterion. After the frequencies were adjusted for game-related exposure, the data revealed a lower risk of injury for wide receivers, offensive linemen, tight ends, defensive linemen, and linebackers than for quarterbacks, running backs, and the defensive secondary. Also, data demonstrate that twice as many concussions occurred during the tackle confrontation as had occurred during the block activity. This was particularly true during rushing plays as opposed to pass play situations.

Bivariate analysis was used to establish associations between any two of three selected variables. Analysis demonstrated a statistically significant association between team and activity. Similarly, a statistically significant association between team and situation was established, with passing being the situation of increased risk for offensive players and rushing being more risky for defensive players. Also, an association was established between the situation and activity variables. Specifically, the tackle during a passing play and the block during a running play were associated. The investigation contributes to research conducted regarding concussion injury and suggests a multicausal mechanism of injury.

Several studies (1, 5, 6) demonstrate a fatality rate in organized football of approximately 3 per 100,000 participants per year which has persisted for over 45 years. The vast majority of these fatalities were due to head and neck injuries. Injury to the central nervous system is common to tackle football. The great majority of these injuries are cerebral concussions. The relatively benign and transient nature of the pathology associated with concussive events accounts for the lack of accurate documentation. According to work by Schneider (8) and Torg et al. (9), the prevalence of this type of injury is still impressive. The persistence of head injury, and sometimes death, in spite of the development of sophisticated protective equipment suggests that there may be other factors that predispose certain individuals to serious head injury.

There are approximately 1.7 million youngsters that participate in football each season. With so many individuals at risk, there is a duty to fully understand the mechanism of injury and the entire process called “concussion,” particularly as it relates to football. Are some players predisposed to these injuries? Are players in certain positions more susceptible to additional insult? To address these questions, hard data is required. This data should be based on sound scientific methodology, not anecdotal reports. The former National Athletic Injury/Illness Reporting System (NAIRS) program in general, and this study in particular, is a collaborative effort to that end.

Methods

The data for this investigation was restricted to the collegiate football seasons from 1975 through 1982. These eight seasons provided substantial data in terms of frequencies of injury and exposures in the college football population. By confining the study to episodes of insult to the brain (concussion), it was possible to differentiate this experience from other types of neurotrauma which occur but which are generally associated with other mechanisms of injury. Also, concussion was selected as a topic for inquiry because of the breadth of the reportability definition for concussion injury used in this study. The definition (7) used to describe this type of injury was the most strict one developed by the NAIRS program and can be considered the most inclusive of the reportable injury categories. Therefore, this study dealt with brain trauma and/or dysfunction to the brain tissue with all the manifested signs, symptoms, and sequelae. Injury to the skull was not considered specifically during the discussion of brain injury unless there was consequent brain trauma.

For the most part, studies of sport injuries have used straightforward descriptive methods of data interpre-
tation. This approach had been used because this research primarily centered upon a research design that accumulated simple frequency data which are most easily presented through a tabular or simple bivariate approach.

Based on these concepts, this study examined the frequency of concussion injury in college football using simple descriptive statistics and chi-square analysis. The variables selected for evaluation were team (offense, defense), activity (block, tackle), and situation (rushing, passing). NAIRS was founded on some basic definitions which insure uniformity through common understanding of functional criteria (7). These operational definitions were first developed at the very beginning of the NAIRS program. These specifications insured uniformity and consistency of reporting. While arbitrary, the consistent use of these definitions has helped to establish a data set that is interpretable over time.

For epidemiological purposes, it is necessary to express frequencies of injury as they relate to the amount of exposure to the sport. In the NAIRS data set, an athlete-exposure is each opportunity for an athlete to get hurt (e.g., 50 athletes at 5 practices equal 250 injury opportunities or 250 athlete/exposures). This concept provides the appropriate perspective for evaluating injuries. It takes into account the number of injuries that did occur in relation to the number of times an injury could have occurred.

The subjects selected for this investigation were college football players on teams which had recorded their injury experience using NAIRS. There were 36,749 athletes followed during the eight-year period on 395 college football teams. There were 2,124 athlete injury incidents identified as concussion injury by the medical support staff. From this total, 208 were reported to be SIGNIFICANT (time-loss from participation was greater than seven days).

**Results of Tabular Analysis**

There were 36,749 athlete-seasons reported during the eight-year study period. This level of participation generated over 3.2 million opportunities to be injured (athlete-exposures) in college football. The exposures occurred during 4,276 games and 31,684 practices. In terms of the division of the total exposure experience, 6.7% of the exposures were during games and 93.3% of the exposures were in practice sessions.

Table 1 displays the frequency of injury to individually defined body parts within the head category. Over the eight years of recording, injury to the Head/Brain/Skull accounted for 74.4% of the total number of injuries within the head category. The next highest specific body part injured was the jaw which accounted for 7.6% of the total injuries in this category. The Head/Brain/Skull accounted for almost ten times the number of injuries with 2,190 as the jaw, with 225 recorded injuries. This finding helped to provide a rationale to focus on the Head/Brain/Skull injuries for continued analysis.

Concussions account for 65% of the injuries reported in the Head/Neck/Spine general body category. Concussions account for 72% of the total number of Head Injuries and 97% of the Head/Brain injuries. These data demonstrate that when an injury to the head is reported, it is likely to occur to the Head/Neck/Spine general body category, and it is likely to be a concussion type of injury. Clearly, concussion was a regular and persistent injury in college football. It should be noted, however, that the largest severity category is at the MINOR level with a rate of 5.2 cases per 100 athletes. For perspective, this translates to 5 MINOR cases of concussion per 100 athletes or 95 athletes out of 100 will not have even a MINOR concussion. Similarly, the MINOR level of severity displays a case rate of almost six cases per ten thousand athlete-exposures and a case rate of almost seven cases per ten thousand athlete-exposures for ALL-REPORTED concussions.

This evidence indicates that concussion is a generally infrequent injury occurrence. When an injury occurs on or about the head, however, it is much more likely to be a MINOR concussion than anything else.

Interestingly, based on the general injury patterns over the eight-year study period, game sessions demonstrated a higher rate of injury than practice sessions. The specific concussion injury pattern over the same time period presented a similar relationship. In fact, the game/practice frequency data indicated case rate for games at 4.6 cases per 1,000 exposures which is ten times greater than the risk demonstrated in the practice environment. 4.5 cases per 1,000 athlete-exposure. This was probably due to the more intense nature of game experiences, with the speeds and consequent forces generated during game play at a higher level than in practice play. There may also be more of a predisposition to take greater risks in a game situation as compared to a practice session. All of these may explain the increased rate of injury during game participation.

Table 2 displays the frequencies of MINOR game-related concussions by game-position. When the rates are calculated, consideration and adjustment is given to the different exposures of players to different playing positions. The offensive team consists of one quarterback, two running backs, two wide receivers, five linemen, and one tight end. The defensive team is assumed to be comprised of four defensive secondary, three linebackers, and four linemen. The rate of injury is highest for quarterbacks and running backs on the offensive side. The defensive experience is more equally distributed among the categorical groups with the secondary players experiencing the highest rate of injury, and the third highest rate of injury when considering both offensive and defensive sides. The relatively higher risk of injury for running backs and the defensive secondary may be attributed to their opportunity to build up speed over a greater distance generating greater forces before being confronted by an opposing player. The lowest relative risk is associated with the linemen on offense and defense. The linemen positions begin every play relatively closer together. Perhaps less force can be generated over a shorter distance. These relationships are persistent in each of the eight years investigated.

In general, two basic activity areas can be identified that encompass the movements of all players in the field of play during each play. The two activities areas include the block and tackle.

Table 3 displays the frequency of all game-related concussion injuries in college football for the years 1975-1982 incurred by tackling and blocking. No distinction is made regarding blocking and being blocked or tackling and being tackled. In some instances, this distinction would be impossible to make. Regardless, the activities of tackling and blocking address the issue at hand, that is, whether the block or tackle is associated with a higher risk for concussive trauma. Simple frequency and percentage calculations indicate that the tackle accounts for 61.9% of the concussive injury experience. By using the ratio of six blocks for every tackle made and the average number of plays per game at 143, the rates calculated in Table 3 show that the
tackle has ten times more risk associated with it than the block.

The higher frequency and rate of concussion injury demonstrated during the tackle activity over the block activity may be related to intensity of play. A tackle activity generally occurs with the football in close proximity which may motivate the players to be more aggressive in carrying out their game-related responsibilities. Many block activities during a play occur away from the location or direction of the football. Consequently, there may not be the same imperative to perform at the highest level of capability.

Table 4 displays the data for ALL-REPORTED concussion injuries by game-related situations of rushing and passing for the 1975-1982 seasons. In this table, the simple frequencies presented indicate that rushing plays account for about twice as many concussions as do passing plays. However, the rates are calculated for each year using the National Collegiate Athletic Association’s data on college statistical trends. This information provided the average number of rushing and passing plays in each of the years under investigation. Since rushing plays outnumber passing plays by 2.2 to 1, the rates generated indicate a very similar risk of concussion occurs in each of the two game situations.

**Results of Bivariate Analysis**

Up to this point, each variable has been considered individually. It is unlikely that every variable was completely independent. Indeed, all of these variables were in operation at the time of injury and may well have influenced the course of the concussion episode interactively.

A review of the chi-square analyses indicated several potentially important variable relationships between two crossed categorical variables. In fact, the chi-square analyses have indicated significant associations among every combination of paired variables (team/activity, team/situation, situation/activity). The chi-square statistics test the agreement between observed frequencies with the frequencies that could be expected. In Table 5, frequency data for the team (offense vs. defense) and activity (tackle vs. block) variables are displayed. There was a statistically significant excess of concussions due to the block in offensive players and due to the tackle in defensive players. It is not startling to find that the block was associated with concussions to offensive players and the tackle was associated with concussions to defensive players. Each of these activities demonstrated the most aggressive action that could be taken by the team member.

From the frequencies displayed for the team (offense/defense) and situation (passing/rushing) variables a statistically significant risk of concussion was demonstrated for offensive teams involved in passing situations and defensive teams involved in rushing plays.

The association between passing plays and the offensive team may be due to a high risk for offensive players such as the quarterback or receivers who are concentrating on throwing or catching the ball rather than preparing to hit an opponent. Within the same variable matrix, rushing was associated with higher risk of concussion injury on defensive teams. Again, intuitive sense indicates that during a rushing play most offensive players are assigned to seek out and confront defensive players. Conversely, all defensive players attempt to overcome blockers and tackle the ball carrier. This is not true during passing plays in that down field blocking is not a threat to defensive players until after the ball is thrown and caught. Also, defensive backs are not allowed to touch a potential receiver until after the ball is caught and then only one of the offensive players has possession of the football.

The concussion frequency data for the situation (passing/rushing) and activity (tackle/block) variables show there was a greater risk of concussion with the tackle activity during a passing play and with a block during a rushing play.

Quarterbacks and receivers may be in a compromising extended position when tackled and defensive players cover large areas before contact is made with the opposition. The block during a rushing play demonstrates the situation/activity situation further. During a running play, the offensive blocking is aggressive and forward moving. This is confronted by the defense’s aggressive movement toward the ball. This type of aggressive confrontation is not always as apparent during a passing play.

Each of the three variable combinations demonstrated a statistically significant association between the paired variables and p < .01. It should be noted that the chi-square statistic only provides a means to document the existence of an association and not its direction or intensity.

**Summary**

The general nature of a concussion injury and an intuitive sense regarding the variety of mechanisms for such an injury are generally supported by the data used for this investigation. Generally, concussion injuries can be described as a relatively infrequent occurrence in college football, particularly with an associated time-loss over seven days. Over the eight-year study period, the data showed a very persistent rate of concussive injury with a very slight downward trend during the last four years. While the thesis of this project focused on the nature of the attendant sport variables which may be associated with a concussion injury, the study helps to establish the scope of concussion injury in college football.

For this study, severity of injury was based on a time-loss criterion. The two primary classification levels used were MINOR (less than seven days time-loss) and SIGNIFICANT (more than seven days time-loss). The ten-times greater rate of MINOR injury to SIGNIFICANT injury indicates that the neuropathology may not always be clinically demonstrated to be serious. Evidence indicates that the less severe neuropathology may not be accurately assessed through routine contemporary clinical evaluation techniques but may still provide the potential for life-threatening sequelae. This has been documented from studies conducted to determine the effects of multiple episodes (2, 3, 4).

Concussion injury during the eight-year study period showed a fairly persistent pattern with a slightly decreasing rate per 100 athletes during the 1979, 1980, and 1981 playing seasons. This slight decline may be the result of rule changes implemented over the course of the study period to curtail spearing and dangerous blocking techniques. On the other hand, the pattern may reflect a reasonable statistical variation based on relatively low raw frequencies. Still, while the rule and coaching changes appear to have had a pronounced effect on catastrophic concussion injury, it may be presumed that they have caused no adverse effect on the pattern of concussion injury of lesser severity. Further efforts need to be made to directly evaluate the multi-causal nature of a concussion injury episode. This would provide greater likelihood of success for preven-
the risk of concussion injury. Even with this baseline data, it is apparent that previous preventive efforts have had some impact on active efforts without adversely affecting the nature of the game. Even with this baseline data, it is apparent that previous preventive efforts have had some impact on the risk of concussion injury.

References

Table 1
Frequency of Head Injury
For Nairs College Football
1975-1982

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N of Cases = Number of Cases

Table 2
Frequency of Minor Game Related Concussion
Injuries Per 100 Game Positions
For Nairs College Football
1975-1982

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N = Number of Cases
R = Rate/100 Game-Related Positions

210 Athletic Training • Fall 1986
Table 3
Frequency of All Game Related Concussion
Injuries At A Rate Per 10,000 Tackle and
Block Occurrences for NAIRS College Football
1975-1982

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<th>Year</th>
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<td>75</td>
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<td>60</td>
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<td>1982</td>
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<table>
<thead>
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<td>1976</td>
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N = Number of Cases
R = Case Rate Per 10,000 Occurrences

Table 4
Frequency of All Reported Game Related Concussion
Injuries At A Rate Per 1000 Rushing and
Passing Plays for NAIRS College Football
1975-1982

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<tr>
<td>1976</td>
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N = Number of Cases
R = Case Rate Per 1000 Plays

Table 5
Observed Frequency of All Reported Game Related Concussion
Injuries for Every Combination of Selected Variables Team, Activity, Situation for NAIRS College Football 1975-1982

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An Athletic Training Program in the Computer Age

Richard Ray, ATC
Tanya L. Shire

Computer applications are being used in the Hope College Athletic Training Program in the areas of isokinetic exercise, record keeping, nutritional counseling, body composition measurement, administration, and teaching. This article highlights many of the preliminary concerns and questions an athletic trainer may have regarding the role computers could play in the profession of athletic training. The specific computer applications which have proven to be successful in the Hope College Athletic Training Program are also described.

The question of computerizing in the profession of athletic training becomes important because of the increasing awareness and use of new technology. Although many people view computers as major contributors to productivity, there are also those who fear and distrust them (4). The decision of whether or not to utilize the computer in an athletic training setting will vary from institution to institution.

There are many reasons for resistance to computerization. Factors such as minimal typing skills, well-established procedures for record keeping and data analysis, and the belief that one is already effectively performing the basic duties of athletic training all contribute to resistance. A gradual introduction to computer technology and specific computer applications appropriate to athletic training can serve to overcome this resistance.

Identifying one's purpose and aim in computer usage is the first step in determining whether a computer can be a positive influence on an athletic training program. It is necessary to decide whether or not the problem to be solved or the goal to be achieved is properly a candidate for computer solution. This implies a great deal of thinking about the potential application of the computer. There are several examples in the literature of computer applications in athletic training. Potash et al. (5) have devised a Cybex II computer interface system which aids in the interpretation and storage of isokinetic rehabilitation data. Abdenour (1) has devised a system of computer aided record keeping and injury documentation.

Where To Start

It is important to emphasize that the athletic trainer need not be a computer expert in order to begin using computers. Donnelly (2) points out that everyone starts as a novice and needs help initially. Requesting further advice and information from someone who is a recognized expert in the field of computer services is vital. Most colleges and universities have computer service departments for this purpose. Many hospitals have contracts with computer consultants whose primary purpose is to provide this type of advice. Athletic trainers in high schools may have access to the expertise of an instructor who teaches computer science in the school district. It is important to involve these personnel in both the initial planning stages as well as in the implementation of the computer applications. Defining the potential applications completely in the initial planning stage will aid in moving the athletic training program toward the desired goal.

The computer consultant is an important resource in providing advice on whether or not to computerize the athletic training program. There needs to be a cost/benefit analysis performed. In addition, advice on the selection of hardware, computer applications and capabilities, programming and testing, and staff training is necessary. The assistance, interest, and support of someone who possesses computer expertise is vital to success in computerizing an athletic training program.

Hardware Selection

The selection of appropriate hardware and software involves many major decisions. Concerning hardware, the decision to use microcomputers versus the mainframe of the institution is crucial. If the athletic training program cannot expect much computer support from the institution, the best solution may be a microcomputer. An important consideration in the use of a microcomputer is adequate data storage capabilities which may require additional memory. However, if access to a mainframe and a programming staff is readily available, it is probably more cost efficient to utilize the institution's larger and more powerful mainframe computer. There are advantages and disadvantages with each solution. Trade-offs are made based on a cost factor of the equipment, response time, storage, and access to existing software and data. The final hardware solution for an athletic training program is dependent upon the relative importance of these factors.

Software Selection

Selection of software depends upon the application. For data storage and reports, one can often utilize existing relational database systems and report writer programs, statistical analysis programs, spreadsheets, and word processing programs. These are standard software packages on most mainframe computers. There
is also a wide variety of these types of software programs available for microcomputers. For more specific computational programs, software may have to be developed. With either of these strategies, the length of time to develop the software is variable, ranging from several hours to several years, depending on the complexity of the problem and the programming resources available. Again, a complete organizational plan with attention to future expansion and growth adds to the flexibility of the computer program.

Hope College Applications

With the preceding information as background, the five specific computer applications used by the Hope College Athletic Training Program are described (Table 1). In order to more fully appreciate the accessibility of these computer programs, it would first be helpful to visualize where each of the four computer terminals are located within the training room and the adjacent exercise physiology laboratory (Figure 1). Each terminal is connected to the Hope College Digital VAX mainframe computer via data-over-voice communication lines. All the programs can be accessed from any computer terminal. However, the terminals are in locations that provide for easy data entry/retrieval based on the various activities that utilize each respective area. In addition, the Head Athletic Trainer has a terminal and modem in his home that provides for access to the computer during off-duty hours.

Table 1

<p>| | |</p>
<table>
<thead>
<tr>
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<tr>
<td>1. Orthotron II Testing and Data Storage Program</td>
<td>3. Nutritional Analysis System</td>
</tr>
<tr>
<td>2. Daily Treatment Log through INGRES Database System</td>
<td>4. Body Composition Calculator Program</td>
</tr>
<tr>
<td>5. Text Processing Editor</td>
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</table>

Figure 1. Location of computer terminals within training room and exercise physiology laboratory.

The second major function of the program is a pretest/re-test function for Hope’s Health Enhancement Program (HEP), a faculty, staff, and community based twelve-week wellness program. This function allows the entry of test data from the Orthotron II which will then be used by the computer program to calculate agonist/antagonist ratios, right-left strength deficit percentages, and strength/body weight ratios. The third part of the program is a pre-season screening function that is almost identical to the pre-test/re-test
function except there is no re-test aspect. This pre-
season screening section has more versatility, however, in that it allows for nine different tests to be entered and stored at any one time.

The fourth section of the program is a rehabilitation record keeping facility. It allows the athletic trainer to build individual records on each rehabilitating athlete and to add to these records on a daily basis. The data can be retrieved and summarized in three ways:
1) a single day’s exercise record,
2) the athlete’s complete exercise record presented in table form, with agonist/antagonist ratios, right-left strength deficit percentages, and strength/body weight ratios where applicable, and
3) any variable of the athlete’s exercise record, presented in graph form, over time.

The final section of the Orthotron II Program is called Screenstats/Hepstats. This allows the data that has been stored in either the pre-test/re-test or pre-season screening files to be analyzed by the SPSS-X Statistics Package. The result is a complete statistical breakdown of all or any part of the data. This is a particularly appealing feature because it allows for development of institutional norms based on local trends and a consistent group of testers.

**SPSS-X is a trademark of SPSS Inc.

**INGRES is a trademark of Relational Technology Inc.

Daily Treatment Log

The second computer application that is being used in the Hope College Athletic Training Program has been developed through INGRES. INGRES is a relational database system that allows the user to create data entry forms on the video screen. Data which are entered onto this form are stored by the INGRES database system. This stored data can then be recalled and sorted by any variable that was entered on the form. Hope’s athletic trainers use the INGRES database system as a daily treatment log. When an athlete receives a treatment, his/her name, social security number, sport, treatment date, treatment time, body part, and injury type are recorded. In addition, up to three modalities and two exercise types may be entered.

Nutritional Analysis System

Another valuable computer aid that is being used is the Nutritional Analysis System. This system was written for use by several groups including the college food service, the Athletic Training Program, the Health Dynamics Program (a required physical education foundation course for freshmen), and the various nutrition classes. Other members of the Hope College community have access to this system via the campus-wide computer terminal network.

The Nutritional Analysis System allows a person to enter the type and quantity of foods eaten into the computer. The student may also enter the percent body fat (all students are tested for percent body fat during the freshman year) and daily exercise levels. The Nutritional Analysis computer program calculates the amount of macronutrients, micronutrients, percent of RDA, calories consumed, number of servings of the various food groups, and the projected amount of fat weight that will be gained or lost per week and per year. This analysis system has been an important aid in nutritional counseling, providing the athlete valuable feedback regarding sound nutritional habits.

Body Composition Calculator Program

The fourth computer program to be discussed is the Body Composition Calculator. This program provides one with a quick and simple method for determining an athlete’s percent fat, percent lean, and ideal weight by means of either hydrostatic weighing or skinfold measurements.

The trainer is prompted with a series of questions and enters the information requested (sex, weight in air, underwater weight, and skinfold measurements). The program makes the appropriate calculations displaying the results on the video screen. This program has been an effective time saver for the exercise physiologists and athletic trainers.

Text Processing Editor

The fifth and final way that computers are being used in the Hope College Athletic Training Program is in the area of teaching and administration. Using the EDT/EDITOR** facility on the VAX mainframe computer as a Text Processor, the athletic trainers prepare budget projections, bid lists for supplies, inventory records, letters, memos, and other administrative documents. In addition, the EDITOR also allows for easy storage, editing, and printing of class notes and examinations.

Summary

In this paper the authors have attempted to outline some of the major concerns athletic trainers might have regarding computerization of their athletic training programs. Decision-making relative to the necessity and/or practicality of computer applications, hardware selection, and software selection is important and can serve to ease the transition from a non-computerized to a computerized program. The authors hope that their experience in cooperatively developing their computerized athletic training program might help others who are ready to consider or begin the integration of computers and athletic training.

**EDT/EDITOR is a DEC/VMS product.
A National Survey of Employment Opportunities for Athletic Trainers in the Public Schools

William E. Prentice, PhD, ATC, LPT
Brad Mishler, MA, ATC

The purpose of this study was to determine 1) what combination of academic preparation and/or professional qualifications gives the athletic trainer optimal job marketability in the public high schools, and 2) specific job responsibilities and salary range of the entry level athletic trainer/teacher in the public schools. A 21-item questionnaire was constructed and mailed to 2,000 high school principals. Conclusions indicate the following: 1) They should have either a Bachelor’s or Masters Degree. 2) They should be certified by the NATA. 3) They should have one to three years of previous clinical experience. 4) They should have a major in P.E., Math, or Science. 5) It is not necessary for the individual to have a major in athletic training. Conclusions regarding specific job responsibilities and salary range suggest 1) the trainer will also have teaching responsibilities in some other academic area and 2) the starting salary range would be 13-16k with a Bachelor’s degree and 16-20k with a Masters degree.

As athletic interests continue to increase so does the need for adequate medical facilities and personnel. Athletic participation is on the rise. During the junior high and high school years more and more sports are being offered as extracurricular activities with a corresponding increase in the number of athletes involved in interscholastic sports programs. This increasing participation and the rapid developmental changes in the bodies of young athletes would seem to require an increased effort focused on minimizing and reducing the negative effects of sports activity on the health of high school athletes.

Although many student trainers express a desire to obtain employment at the collegiate or professional level, there is little question that the most common job opportunities for entry level athletic trainers in the near future lie primarily in the public and private high schools. Perhaps one of the biggest questions which the NATA must deal with in the near future is “Are our athletic training education programs preparing students for the type of employment opportunities which will most likely exist following graduation?”

In 1980 the Board of Directors of the NATA, based on recommendations from the Professional Education Committee, determined that by 1990 all NATA approved undergraduate athletic training education programs must be either a “major” or an “equivalency”. Essentially the major is defined as a field of study which ultimately will lead to a baccalaureate degree specifically in athletic training. The equivalency is offered as an alternative approach for institutions which already have approved athletic training education programs where a “major” in athletic training cannot be approved. The equivalency program must offer coursework in athletic training which would be equivalent to any other major field of study at that particular institution even though a degree cannot be awarded specifically in athletic training.

There is still significant debate among the membership of the NATA as to whether this 1980 mandate was the correct course for our educational programs. Certainly as a health care profession this move toward a “major” should greatly enhance our credibility among other health care organizations. However, this decision may have ironically placed our students in a situation which will in effect reduce the likelihood of finding employment in the public or private high schools following graduation.

As NATA Liaison Representative to various education organizations, the author attended the national conventions of groups such as the American Association of Secondary School Principals and the National School Board Association. These groups of professionals are the ones most responsible for hiring athletic trainers to work in the public schools. As a result of the association with these organizations, a concern arose about whether our educational and internship programs were providing optimal job marketability for graduating student trainees.

This study then was concerned with two major questions:
1) What are the optimal qualifications for employment of the athletic trainer in the public schools?
2) What type of job responsibilities, salaries, etc., can be expected when one obtains employment in the public schools?

Method

A 20-item questionnaire was prepared, validated and subsequently mailed to 2000 high school principals.
randomly selected from over 25,000 public high schools in the United States. After an initial mailing and follow-up, of the 2000 questionnaires mailed 777, or 39%, were returned.

Results

Of the schools returning the questionnaire, only 22.7% currently employ an athletic trainer in any capacity (Table 1). In those schools which do employ an athletic trainer, only 57.4% are certified by the NATA. However, 77.1% of the schools which have athletic trainers who are not certified, preferred that their athletic trainers would be certified. Overwhelmingly, the principals preferred that their athletic trainer be a certified member of the NATA (Table 2). Certification by the NATA seems to have become a prerequisite for consideration as a potential employee.

Unfortunately, of the schools not currently employing an athletic trainer, only 19.4% indicated a desire to have an athletic trainer in the future. Of those schools which have plans to hire an athletic trainer in the future, 78.3% indicated that there will also be some teaching responsibilities, while only 20.0% will be hired as athletic trainers only. Those who are employed on a full-time basis either as athletic trainers only, or as teacher/athletic trainers are more frequently certified than those who are employed on a part-time basis in either capacity (Table 3). The largest majority of the schools which currently employ athletic trainers, hire them as full-time teachers with some athletic training responsibilities (Table 4).

Since it appears that an individual hired as an athletic trainer will usually also be employed as a full-time teacher, it is important to know what subject areas have the greatest needs in the public schools. Respondents were asked to rank in order from one to eight, subject areas which they preferred their athletic trainers be capable of teaching (one being most preferable). When all responses were weighed and added together it appeared that the ability to teach science and mathematics was most desirable followed by physical education, English, industrial arts, history, sociology/psychology and foreign languages (Table 5).

There did not appear to be any real preference in hiring an individual to work as an athletic trainer who had a major specifically in athletic training as opposed to another area of academic specialization (Table 6). However, it should be evident from reviewing Table 5 that it is more desirable for a prospective employee to have teaching credentials in the areas of science and mathematics.

It appears that no real preference exists regarding the level of degree the athletic trainer holds. The responses were essentially equally divided between the Bachelor’s and Master’s degrees (Table 7). Principals seem to prefer to hire an individual who has 1-3 years of previous experience as an athletic trainer (Table 8). A significant percentage indicated, however, that they were not opposed to hiring a new graduate.

Since relatively few of the schools surveyed employed an athletic trainer in any capacity, the individual who is most often charged with providing the primary health care for the injured athlete is the coach (Table 9). This should be of major concern since coaches generally do not have the time nor the expertise to deal with each injury which may occur.

Starting salaries for the entry level athletic trainer holding a Bachelor’s degree who will also teach full-time range between $13,000 and $16,000 (Table 10). With a Master’s degree, the starting salary range increases to $16,000 to $20,000 (Table 11). In addition to these base salaries it appears schools will pay an additional stipend for athletic training responsibilities. Such stipends typically range between $500 and $2,000 for the school year (Table 12).

Discussion

After analyzing the data from the returned questionnaires, several key factors in providing graduating student trainers optimal employment marketability in the public high schools became apparent.

1) It appears to be extremely important to those individuals doing the hiring that the athletic trainer be certified by the National Athletic Trainers Association. Even those schools who already employed non-certified athletic trainers strongly indicated they preferred to employ a certified trainer.

2) It appears that an athletic trainer hired in the public schools will most likely be employed as a full-time teacher with additional athletic training responsibilities. The principals responding seem to feel that science and mathematics are the two subject areas where qualified teachers are most often needed. According to the survey, physical education was ranked as the third most desirable subject area for a teacher/athletic trainer, although this may be somewhat misleading.

Teaching health and/or physical education would obviously be the subject area most closely related to working as an athletic trainer. However, those athletic trainers who recently have attempted to locate employment in the public schools for their student trainers holding degrees in physical education know that there are few or no jobs for students with these qualifications. Conversely, if a student trainer is certified to teach in any subject area other than health and physical education, the job possibilities suddenly become numerous in every geographic region of the United States.

Requirements for obtaining teaching certification in a specific subject area vary from state to state. However, in most cases certification requires completion of a certain number of credit hours in that subject area along with a student teaching experience.

The structure of the athletic training education programs has placed the student trainer in a compromising situation. Certainly the large majority, or perhaps all, of the athletic training education programs are housed in the Departments of Health and Physical Education at the various institutions, which means that student trainers will most likely obtain a degree in that area. Again, few jobs exist in the public schools for individuals with this type of expertise.

The decision to require a major in Athletic Training may further reduce the chances of a student finding a position as an athletic trainer in the public schools. While the increase in the number of core courses in athletic training should enhance the educational preparation of the entry level trainer, it coincidentally reduces the likelihood that the student trainer will be able to achieve teaching certification in any academic specialization which would afford optimal job marketability in the public schools.

Therefore, it appears to be extremely important for the graduating student trainer who will have
### Table 1
Number of Schools Currently Employing An Athletic Trainer In Any Capacity

<table>
<thead>
<tr>
<th></th>
<th>Total #</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>176</td>
<td>22.7</td>
</tr>
<tr>
<td>No</td>
<td>592</td>
<td>76.2</td>
</tr>
<tr>
<td>No Response</td>
<td>6</td>
<td>.8</td>
</tr>
</tbody>
</table>

### Table 2
Do You Prefer That Your Athletic Trainer Be Certified By the NATA

<table>
<thead>
<tr>
<th></th>
<th>Total #</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>663</td>
<td>85.2</td>
</tr>
<tr>
<td>No</td>
<td>71</td>
<td>9.1</td>
</tr>
<tr>
<td>No Response</td>
<td>43</td>
<td>5.5</td>
</tr>
</tbody>
</table>

### Table 3
Trainers Employed Full-Time Are More Frequently Certified

<table>
<thead>
<tr>
<th></th>
<th>Certified</th>
<th>Not Certified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-Time AT Only</td>
<td>19(86.4)</td>
<td>2(9.1)</td>
</tr>
<tr>
<td>Full-Time Teacher/AT</td>
<td>44(65.7)</td>
<td>22(32.8)</td>
</tr>
<tr>
<td>Part-Time AT Only</td>
<td>20(45.5)</td>
<td>24(54.5)</td>
</tr>
<tr>
<td>Part-Time Teacher/AT</td>
<td>19(38.0)</td>
<td>29(58.9)</td>
</tr>
</tbody>
</table>

### Table 4
Schools Currently Employing Athletic Trainers

<table>
<thead>
<tr>
<th>Responsibilities</th>
<th>Total #</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-Time AT Only</td>
<td>22</td>
<td>12.8</td>
</tr>
<tr>
<td>Full-Time Teacher/AT</td>
<td>64</td>
<td>36.6</td>
</tr>
<tr>
<td>Part-Time AT Only</td>
<td>43</td>
<td>24.8</td>
</tr>
<tr>
<td>Part-Time Teacher/AT</td>
<td>47</td>
<td>27.0</td>
</tr>
</tbody>
</table>

### Table 5
What Subjects Would You Prefer That Your Athletic Trainer Be Prepared To Teach

<table>
<thead>
<tr>
<th>Subject Area</th>
<th>Weighted Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Science</td>
<td>1271</td>
</tr>
<tr>
<td>2) Mathematics</td>
<td>1517</td>
</tr>
<tr>
<td>3) Physical Education</td>
<td>1833</td>
</tr>
<tr>
<td>4) English/Literature</td>
<td>2013</td>
</tr>
<tr>
<td>5) Industrial Arts</td>
<td>2543</td>
</tr>
<tr>
<td>6) History</td>
<td>2672</td>
</tr>
<tr>
<td>7) Sociology/Psychology</td>
<td>2716</td>
</tr>
<tr>
<td>8) Foreign Language</td>
<td>2839</td>
</tr>
</tbody>
</table>

Rank From 1 = Most Preferable To 8 = Least Preferable

### Table 6
Major in Athletic Training Versus Any of the Other Subject Areas

<table>
<thead>
<tr>
<th></th>
<th>Total #</th>
<th>% of Total</th>
</tr>
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<tbody>
<tr>
<td>Yes</td>
<td>372</td>
<td>47.9</td>
</tr>
<tr>
<td>No</td>
<td>350</td>
<td>45.0</td>
</tr>
<tr>
<td>No Response</td>
<td>55</td>
<td>7.1</td>
</tr>
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### Table 7
Type of Degree

<table>
<thead>
<tr>
<th></th>
<th>Total #</th>
<th>% of Total</th>
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<tbody>
<tr>
<td>Bachelor’s</td>
<td>367</td>
<td>47.2</td>
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<tr>
<td>Master’s</td>
<td>335</td>
<td>43.1</td>
</tr>
<tr>
<td>Doctorate</td>
<td>24</td>
<td>3.1</td>
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</table>

### Table 8
Previous Experience

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<thead>
<tr>
<th></th>
<th>Total #</th>
<th>% of Total</th>
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<tbody>
<tr>
<td>New Graduate</td>
<td>139</td>
<td>17.9</td>
</tr>
<tr>
<td>1-3 Years</td>
<td>410</td>
<td>52.8</td>
</tr>
<tr>
<td>3-5 Years</td>
<td>127</td>
<td>16.3</td>
</tr>
<tr>
<td>More Than 5 Years</td>
<td>53</td>
<td>6.8</td>
</tr>
<tr>
<td>No Response</td>
<td>48</td>
<td>6.2</td>
</tr>
</tbody>
</table>

### Table 9
Who Provides Primary Health Care If Not An Athletic Trainer?

<table>
<thead>
<tr>
<th></th>
<th>Total #</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coaches</td>
<td>474</td>
<td>61.0</td>
</tr>
<tr>
<td>Physician</td>
<td>37</td>
<td>4.8</td>
</tr>
<tr>
<td>(Volunteer)</td>
<td>25</td>
<td>3.2</td>
</tr>
<tr>
<td>School Nurse</td>
<td>23</td>
<td>3.0</td>
</tr>
<tr>
<td>EMT</td>
<td>23</td>
<td>3.0</td>
</tr>
<tr>
<td>Physician</td>
<td>23</td>
<td>3.0</td>
</tr>
<tr>
<td>(Compensated)</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Teachers</td>
<td>15</td>
<td>2.2</td>
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</table>

### Table 10
Starting Salaries With Bachelor’s Degree

<table>
<thead>
<tr>
<th>Range</th>
<th>Total #</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-10 K</td>
<td>6</td>
<td>.8</td>
</tr>
<tr>
<td>10-13 K</td>
<td>198</td>
<td>25.5</td>
</tr>
<tr>
<td>13-16 K</td>
<td>317</td>
<td>40.8</td>
</tr>
<tr>
<td>16-20 K</td>
<td>77</td>
<td>9.9</td>
</tr>
<tr>
<td>20-25 K</td>
<td>12</td>
<td>1.5</td>
</tr>
<tr>
<td>Over 25 K</td>
<td>3</td>
<td>.4</td>
</tr>
<tr>
<td>No Response</td>
<td>164</td>
<td>21.1</td>
</tr>
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</table>

### Table 11
Starting Salaries With Master’s Degree

<table>
<thead>
<tr>
<th>Range</th>
<th>Total #</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-10 K</td>
<td>1</td>
<td>.1</td>
</tr>
<tr>
<td>10-13 K</td>
<td>49</td>
<td>6.3</td>
</tr>
<tr>
<td>13-16 K</td>
<td>294</td>
<td>37.8</td>
</tr>
<tr>
<td>16-20 K</td>
<td>218</td>
<td>28.1</td>
</tr>
<tr>
<td>20-25 K</td>
<td>34</td>
<td>4.4</td>
</tr>
<tr>
<td>Over 25 K</td>
<td>9</td>
<td>1.2</td>
</tr>
</tbody>
</table>

### Table 12
Stipends For Athletic Training Duties Only

<table>
<thead>
<tr>
<th></th>
<th>Total #</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>$500-1000</td>
<td>105</td>
<td>13.5</td>
</tr>
<tr>
<td>$1000-1500</td>
<td>123</td>
<td>15.8</td>
</tr>
<tr>
<td>$1500-2000</td>
<td>106</td>
<td>13.6</td>
</tr>
<tr>
<td>$2000-2500</td>
<td>78</td>
<td>10.0</td>
</tr>
<tr>
<td>$2500-3000</td>
<td>50</td>
<td>6.4</td>
</tr>
<tr>
<td>Over $3000</td>
<td>69</td>
<td>8.9</td>
</tr>
<tr>
<td>No Response</td>
<td>246</td>
<td>31.7</td>
</tr>
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</table>
**Questionnaire**

Name of School ____________________________

Location ____________________________

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<thead>
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<th></th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Do you consider your school to be:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>128</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Suburban</td>
<td>269</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>372</td>
<td></td>
</tr>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>What is the student enrollment of your High School?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>0-1500</td>
<td>265</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>2001-2500</td>
<td>43</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>2501-3000</td>
<td>143</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>3501-4000</td>
<td>226</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>Over 4500</td>
<td>61</td>
<td></td>
</tr>
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<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>3.</td>
<td>How many faculty members are currently employed in your High School?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1-25</td>
<td>180</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>51-75</td>
<td>161</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>Over 150</td>
<td>61</td>
<td></td>
</tr>
</tbody>
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<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4.</td>
<td>How many men's and women's varsity sports does your High School offer?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1-5</td>
<td>71</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>11-15</td>
<td>226</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>Over 20</td>
<td>61</td>
<td></td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5.</td>
<td>Do you currently employ an Athletic Trainer?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>176</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>592</td>
<td></td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6.</td>
<td>If answer to question 5 is no, who provides health care for your athletes?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Coaches</td>
<td>474</td>
<td></td>
</tr>
<tr>
<td></td>
<td>School Nurse</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Physician</td>
<td>37</td>
<td>6</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7.</td>
<td>How long have you employed an Athletic Trainer?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0-1 years</td>
<td>25</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>1-3 years</td>
<td>48</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>3-6 years</td>
<td>40</td>
<td>6</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>8.</td>
<td>What is the employment status of your Athletic Trainer?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Full time with Athletic Training duties only.</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Full time Athletic Trainer with teaching responsibilities.</td>
<td>66</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Part time with Athletic Training duties only.</td>
<td>44</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Part time Athletic Trainer with teaching responsibilities.</td>
<td>46</td>
<td></td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>9.</td>
<td>Is your Athletic Trainer certified by the National Athletic Trainers Association?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>97</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>79</td>
<td></td>
</tr>
</tbody>
</table>

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<th></th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>10.</td>
<td>If your state offers licensure, is your Trainer licensed?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>92</td>
<td></td>
</tr>
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<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>11.</td>
<td>Would you prefer an Athletic Trainer to hold a:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bachelor's Degree</td>
<td>367</td>
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</tr>
<tr>
<td></td>
<td>Master's Degree</td>
<td>335</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ph.D.</td>
<td>24</td>
<td></td>
</tr>
</tbody>
</table>

12. Would you prefer your Athletic Trainer to be certified by the National Athletic Trainers Association?  
   1) Yes | 662 | 2) No | 115

13. What prior Athletic Training experience would you desire in job applicant?  
   1) 0-1 years | 132 | 3) 3-5 years | 126 |
   2) 1-3 years | 404 | 4) Over 5 years | 58 |

14. What prior Athletic Training experience would you desire in job applicant?  
   1) Athletic training and teaching responsibilities. | 699 | 2) Athletic training duties only. | 168 |

15. If you prefer a teacher/trainer combination, in order of preference, teaching what courses would enable them optimal job marketability?  
   347 P.E./Health  
   163 Mathematics  
   95 Science  
   10 English  
   4 Foreign Language  
   3 History  
   1 Soc./Psych.  
   18 Industrial Arts

16. If you were to hire an Athletic Trainer would you prefer he or she have an Athletic Training major?  
   1) Yes | 372 | 2) No | 35

17. If you employ an Athletic Trainer/teacher combination, what is the annual stipend for Athletic Training duties only?  
   1) $500-$1000 | 105 | 4) $2000-$2,500 | 78 |
   2) $1,000-$1,500 | 123 | 5) $2,500-$3,000 | 50 |
   3) $1,500-$2,000 | 106 | 6) $Over $3,000 | 69 |
   NO RESPONSE | 246

18. If you intend to or already employ an Athletic Trainer, in what range would be/was the starting salary with a Bachelor's degree?  
   1) $500-$10,000 | 105 | 4) $16,000-$20,000 | 78 |
   2) $10,000-$13,000 | 123 | 5) $20,000-$25,000 | 12 |
   3) $13,000-$16,000 | 294 | 6) $Over $25,000 | 9 |
   NO RESPONSE | 164

19. If you intend to or already employ an Athletic Trainer, in what range would be/was the starting salary with a Master's degree?  
   1) $5,000-$10,000 | 1 | 4) $16,000-$20,000 | 218 |
   2) $10,000-$13,000 | 49 | 5) $20,000-$25,000 | 34 |
   3) $13,000-$16,000 | 294 | 6) $Over $25,000 | 9 |
   NO RESPONSE | 172

20. Do you intend to hire an Athletic Trainer in the near future?  
   1) Yes | 115 | 2) No | 862

218  Athletic Training • Fall 1986
a major or perhaps equivalency in athletic training to also obtain teaching certification in some area of academic specialization other than health and physical education. Even though this will likely extend the time required for completing the student's formal education, it will greatly enhance the chances of obtaining employment as teacher/athletic trainer in the public schools.

3) The group surveyed did not seem to have preference as to whether the person hired as an athletic trainer should hold a Bachelor's or Master's degree. However, they did prefer that the individual have from one to three years of previous experience as an athletic trainer.

The most likely job responsibilities and salary ranges for the entry level athletic trainer appeared to be the following:

1) The individual will be hired as a full-time teacher with additional athletic training responsibilities.
2) Salary will most likely range between $13,000 and $20,000, depending on the type of degree.
3) There will be an additional stipend of $500 to $2000 for athletic training duties.

**Recommendations**

Based on the results of this survey the following recommendations can be made for student athletic trainers attempting to achieve optimal employment marketability in the public schools following graduation:

1) Achieve certification as an Athletic Trainer by the National Athletic Trainers Association.
2) Obtain a teaching certification in some academic specialization other than health and physical education.

It is the responsibility of all involved with the formal educational preparation of student athletic trainers to provide them with accurate, well informed guidance and counseling as to how they can best prepare for seeking employment in their chosen profession.

This study was funded in part by the Board of Directors of the NATA.

**Suggested Reading**


(Your library could be providing)

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The Journal of the National Athletic Trainers Association, Inc.

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Please enter our subscription for *Athletic Training*. Enclosed is $20.00 for a one year subscription to your publication. Our address is:

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Thank you.

(Make all checks payable to: Athletic Training.)
Self Concept and Injury Frequency Among Female College Field Hockey Players

Marybeth Lamb, MS, ATC

Tennessee Self Concept Scale scores and injury data were collected from twenty one (21) female college varsity field hockey players in the Fall of 1982. The results were correlated using the Pearson Product Moment Correlation Coefficient. The results showed a statistically significant inverse relationship between self concept and injury frequency with p = less than .01. These findings supported the hypothesis that female college varsity field hockey players with low self concept scores, as measured by the Tennessee Self Concept Scale, tend to have more injuries.

At any level of athletics, there is one variable which is always present: injury. Athletes will become injured from youth football to world class athletics. Within these levels of competition, there are those athletes who are more prone to injury than others. These recurring injuries hamper the smooth operation of a team by the phenomenon of athletics, self concept has been chosen as the variable of interest because most coaches and athletic trainers deal with the physiological aspects of the athlete, tending to overlook the psychological aspects. By ignoring the psychological state of the athlete, we could, in reality, be compounding the physiological injuries of that athlete.

Self concept influences one’s behavior. It encompasses the individual's response to the perceptions of others, events in the environment, and internal factors such as emotions and values (4). These variables all interact to form the self concept of an individual and, according to Burns (4), this is why all individuals have differing self concepts.

The total pain experience has also been the topic of intense research (5,13,14). While the pain that is experienced is very much real to the individual, the degree of pain that is experienced is determined by the perceptual characteristics of that individual. Ryan (16) states that we all may receive the same objective stimuli, however, we do not perceive it the same way. We are all living in a world which is unique to each of us. Ryan studied Petrie's evaluation of perceptual characteristics of individuals and his subsequent classification of these persons as either 1) reducers, 2) augmentors, or 3) moderates. Pain and suffering are related to these contrasted perceptual types. Reducers are those who reduce the intensity of pain and therefore tolerate pain well, while augmentors tend to intensify pain and do not tolerate pain well.

Yaffe (22) states that by exploring the self concepts of athletes we can also understand and possibly predict the psychological impact of the injury, its management, and the likely outcome in terms of adaptation and further occurrence of injury.

Therefore, since perceptual characteristics are related to both pain and self concept, the implications of a possible relationship between self concept and injury are important to the coach as well as the athletic trainer. By determining the nature of the relationship between these two variables (self concept and injury), we can better understand the behavior of a given athlete toward injury and pain.

In addition, by identifying those athletes whose self concept is determined to be low, the coach might be able to intervene using the Hyler and Mitchell (1) approach discussed later in this paper. Positive intervention would get the coach involved with the athlete as a whole human being, mind and body. It is only when mind and body are perceived as one entity that optimum performance is achieved.

Purpose

The purpose of this study was to ascertain whether the self concept levels of college age women varsity field hockey players were related to the actual number of injuries that players sustain in a given season.

Three hypotheses were investigated: 1) there would be an inverse relationship between injury frequency and self concept levels as measured by the Tennessee Self Concept Scale; 2) those athletes with a lower self concept level would be more likely to be injured the day before a game as opposed to being randomly injured; and 3) there would be more injuries during practice than games by those with low self concept levels.

Review of the Literature

Self Concept and Body Concept

The term self concept is much more commonly used than the simpler term self. This is because individuals are not always aware of their absolute true or actual selves but only of their concepts and perceptions of themselves (7). An individual’s self concept is based on how the inner self interprets data that is received from the individual, others, and the environment. Fitts (7) has formulated basic postulates of self concept which state: 1) an individual’s self concept is based on the individual’s perceptions of the way others are responding to that individual; 2) an individual’s self concept functions to direct behavior; and 3) an individual’s perception of the responses of others toward that individual reflects the actual responses of others. The fact that there are differences in how the individual interprets this information is the premise of differing self concepts. Therefore, the self concept of an individual...
is the culmination of all factors which surround and affect that individual.

Burns (4) describes the theoretical structure of self concept by using a hierarchical composite. The self concept is divided into three aspects of the self: 1) the cognized self- the concept of the individual as he thinks he is, 2) the other self- the self derived from the reflected appraisals of significant others, and 3) the ideal self-the self as the individual would like to be.

Burns states that the ideal self is a set of interpretations about the individual when that individual is revealing his most personal wants and aspirations. It may not be in touch with the cognized self at all. It may be so far from the cognized self that the individual is burdened with depression through it’s unattainability. It is this void between the capabilities and the expectations or goals of the individual that produces an increased anxiety with differing results.

Body concept is an aspect of an individual which is often confused with self concept. Body concept deals with the way the individual views his/her body in relation to society and its stereotypes. Snyder and Kivlin (18) studied the hypothesis that when a female athlete is participating in athletics, there sometimes occurs a type of inner confusion due to the conflicting stereotypes of female and athlete. Their investigation of college females showed no significant differences between athletes and non-athletes with regard to their respective psychological well being or body image. Therefore, according to Snyder and Kivlin, any stereotypical confusion is present only in society’s point of view and not the athletes’. Society as a whole tends to view athletic participation as a non-feminine activity or an activity which masculinizes those who participate (18).

A person’s perceptions of the surroundings, stimuli, and emotions all affect the person’s behavior. Heaps (10) states that the way in which one perceives his body influences one’s behavior toward his body. Body characteristics which are not valued by the self can be expected to undermine the individual’s general regard of his body. However, body characteristics which are valued by the self can enhance and support the individual’s general regard of his body.

It has been determined by Secourd and Jourard (16) that self concept and body concept are, even though they are separate entities, inter-related. They found that feelings about the body (body concept) are highly correlated with feelings about the self. They found that the individual’s self concept made significant contributions to the individual’s body concept. If the self is highly correlated with feelings of the body, as Secourd and Jourard suggest, it would seem to follow that injury to the body is related to self concept.

Pain as a Psychological Experience

Two aspects of athletics are the phenomena of injury and pain. In order to understand how pain and injury can be influenced by the psychological self concept, specific pain theories must be reviewed.

One theory, proposed by Melzak (14), is called the Gate Control Theory. The Gate Control Theory holds that a neural mechanism in the dorsal horns of the spinal cord acts like a gate which can increase or decrease the flow of nerve impulses from the peripheral fibers to the central nervous system. Somatic input is therefore subject to the modulating influences of the gate before it can evoke pain perception and response. When the amount of input passing through the gate exceeds a critical level, it activates the neural areas responsible for pain experience and response (14). Melzak indicates that psychological processes may influence pain perception and response by acting on the spinal gating mechanism. Some of these psychological activities may open the gate while others may close it.

People attach variable meaning to pain producing situations and this interpretation greatly influences the degree and quality of pain an individual feels. Pain, like all perceptions, is subjective, and individual. It is modulated by degree of attention, emotional state, and the conditioning influence of past experiences. In this way, pain becomes a function of the whole individual, including his present thoughts and fears as well as his hopes for the future (14).

Weisenberg (21) has divided pain and injury into two classes; psychogenic and organic. Psychogenic pain is defined as pain caused wholly or mainly by psychological factors and which fulfills a need of the individual. These needs may range from need for attention from members of family to masochistic needs for punishment for real or imagined misdeeds. Organic pain is defined by Weisenberg as pain caused mainly by physical factors. Psychogenic pain and injury occurs under three main circumstances; hallucinations, muscle tension, and conversion hysteria. These three factors may act alone or together with physical factors to cause pain. In this inter-relationship the psychogenic and the organic come together for the athlete to form the total pain experience.

Pain and Injury Related to Self Concept

Yaffe (23) determined that the psychological component of pain is so prevalent that predictions concerning injury frequency can be made based on an individual’s self concept level. He indicated that psychologists can assess an athlete’s self concept level through interviews, analogue measures, direct observations, and psychological procedures. Consequently, predictions can be made concerning the probability of an athlete becoming injured, that athlete’s reaction to being injured, and possibly further occurrence of injury.

R. F. Irvin (12) found that non-injured and injured football participants exhibited differing personality profiles, especially the factor of self concept. Irvin indicated that the number of injuries was inversely related to self concept levels of the participants.

Ogilvie and Tutko (18) investigated the injury prone athlete to determine the psychological correlates of the phenomenon. They developed three categories of injury prone athletes: the bona-fide or actually injured, the psychologically injured or pain with no apparent injury, and the malingering or the athlete who intentionally fakes an injury. In some instances there was a tendency for athletes to gain more acclaim being hurt than participating. According to Ogilvie and Tutko, when an athlete’s self image is unclear, the athlete’s injury will make him feel more worthwhile. These findings would indicate that athletes with a low self image may tend to become injured so as to avoid athletic responsibility and expectations.

In summary, the self concept is a measure of how an individual combines the totality of attitudes, judgments, and values relating to his behavior, abilities, and qualities. These concepts are influenced by the surroundings, emotions, and stimuli presented (10). These same factors have been shown to influence the pain and injury phenomenon in athletics (12,14). Since these two variables of human behavior share common factors, a relationship between these variables would be expected.
Tennessee Self Concept Scale

Much of the literature in this area has utilized the Tennessee Self Concept Scale (TSCS) to measure self concept (3,6,9,13,22,24). The TSCS has been shown to display both content and construct validity (8), as well as 91% reliability (24). It is most frequently used because it is multivariate, and yields scores that identify the contributions of the different facets of self concepts. It also has been used effectively with college students, and has been cross validated with the Minnesota Multi-phasic Personality Inventory and the Edwards Personal Preference Schedule (3).

Methodology

For this research, members of the State University of New York College at Brockport Varsity Field Hockey Team were selected due to their availability for study. There were a total of twenty-one athletes who agreed to participate in this research project. The sample consisted of nine returning players and twelve new players. Of this group, there were four seniors, six juniors, five sophomores, and seven freshmen. There were four transfers on the team.

Data collection was done utilizing the Tennessee Self Concept Scale and injury evaluation forms used by the athletic trainers at the State University of New York College at Brockport. All team members consented to participate in this research project.

The Tennessee Self Concept Scale was administered on the first indoor practice session which was approximately three weeks into the season. This was selected as a test date so that it was determined by a factor which could not be controlled (the weather) and therefore was randomly selected. There was no cutting of players on the team so all players took the test. No scrimmages between another school had taken place, and practice was held once a day.

In order to establish reliability of the Tennessee Self Concept Scale for this population, the scale was administered two weeks after the first test administration. This time span of two weeks was selected by the authors of the scale as the minimum time between test administrations so that memory of the questions was not a factor in its reliability coefficient. A mean score between the two test administrations was determined for each athlete. It was this mean score that was used to contribute of the different facets of self concepts. It also has been used effectively with college students, and has been cross validated with the Minnesota Multi-phasic Personality Inventory and the Edwards Personal Preference Schedule (3).

Correlation of self concept and injury frequency was determined by using the mean score of the two test administrations of the Self Concept Scale with the number of injuries actually sustained by individual athletes. This correlation was also found using the Pearson Product Moment Correlation Coefficient. The coefficient was determined to be -0.917 which was statistically significant with p equaling less than .01. These results support the literature which indicates that a low self concept level as measured by the Tennessee Self Concept Scale was related to a high frequency of injury for Varsity Field Hockey Players in this study.

In addition, data was collected on injury rate during critical time periods in the field hockey season. Particular interest was paid to those injuries occurring the day just prior to a contest. Out of a total of 127 injuries sustained by the field hockey team during the season, 29 injuries (23%) occurred the day before a game. Of these 29 injuries, 19 (65%) belonged to those athletes with the lowest self concept scores. The mid-third of the number of athletes accounted for 8 injuries the day before a game (28%) while those athletes with the highest self concept scores (7) sustained only 2 injuries (7%). (See Table 2)

One interesting finding which surfaced was that 31% of all injuries occurred on game days which accounted for 21% of all days in the season. This could be explained by the competitive atmosphere of a game day, as opposed to a practice session. Another result which was particularly interesting was that of all the injuries which occurred on game days, 80% of them occurred during winning games which only accounted for 57% of total games during that season.

Data Analysis

At the end of the season, including post-season play, injury data for all consenting athletes was tabulated and put into an ordinal scale. The injury data was collected every day throughout the season.

The two test administrations of the Tennessee Self Concept Scale were analyzed and a mean score for each athlete was determined (See Table 1). The score of the two test administrations of the Tennessee Self Concept Scale were correlated so that reliability could be determined. Reliability was determined using the Pearson Product Moment Correlation Coefficient and was found to be .95, with p equaling less than .01 for this population. This finding supports the literature which also utilized the Tennessee Self Concept Scale (3,6,9,13,22,24).

The information collected also raises some questions as to the use of an injury by the athlete to reinforce the present self concept. Since 65% of all injuries which occurred the day before a game belong to those seven athletes in the lower 33% of self concept scores, then low self concept levels may have reflected a desire of those athletes not to play or uphold a responsibility on the team. The athlete may feel that the goals or expectations...
The number of injuries that occurred during the game is perplexing one. This might be due to extra effort put forth to win the game and therefore a tendency toward injury. However, throughout the season, it was during the losing games that the athletes appeared to be more anxious, stressful, and intense in an effort to win. Therefore, one might think that the injury/game ratio would be biased toward the losing games. Since just the opposite is true, more research is needed in this area of self concept and injury frequency.

### Table 1
Scores of the Tennessee Self Concept Scale and Number of Injuries by Subject Number

<table>
<thead>
<tr>
<th>Subject</th>
<th>Score 1</th>
<th>Score 2</th>
<th>Mean</th>
<th>Injuries</th>
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* Mean was calculated by adding score 1 to score 2 and dividing by two.

### Table 2
Breakdown of Injuries Sustained According to Self Concept Levels

<table>
<thead>
<tr>
<th>Subject</th>
<th>S.C. Score</th>
<th>Injuries Before Game*</th>
<th>Injuries W Game**</th>
<th>Injuries L Game†</th>
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</table>

* Number of injuries that occurred the day before a game

** Number of injuries that occurred during the game

† Number of injuries that occurred during a winning game

†† Number of injuries that occurred during a losing game

Implications/Recommendations

The implications of this study for the coach and athletic trainer are important for possible prevention of injury. Hyler and Mitchell (11) in a study of runners concluded that self concept levels could be raised by using an individualized counseling program. Their individualized counseling program included meeting with the running group for one hour each week to discuss inter-personal relationships and other personal problems. The counseling used increments of success to reinforce and magnify the benefits that resulted from the running. The counseling also provided stimulation for overcoming the difficulties and resistance that are part of physical fitness activities. Also, the authors state that the counseling helped students clarify the values of activity and encouraged them to seek an increasing number of benefits that can be derived from physical activities. The investigation revealed that the greatest change in both self concept and physical fitness occurred in the low self concept group thus raising both their performance level as well as self concept level.

Since in the current study, self concept is apparently related to injury frequency, the athletic trainer could possibly influence the injury rate by implementing a similar system of counseling and physical activity to raise self concept levels. It should be noted that the coach or athletic trainer should be trained or experienced in the counseling of groups before this is done.

It would seem beneficial for the coach and athletic trainer to administer the Tennessee Self Concept Scale to their team in order to identify those athletes with low self concepts. By measuring the self concept levels with an objective instrument such as the Tennessee Self Concept Scale, subjective judgements on the part of the coach are eliminated. In addition, those athletes whose self concept levels border on the low side, and who may be more prone to injury, are identified.

Since self concept appears to be related to injury frequency, a program designed to raise self concept such as Hyler and Mitchell's might have an effect on the injury frequency of athletes. A longitudinal study would have to be conducted to investigate the possible effects of counseling on injury frequency.

The findings of this research indicate that by studying the self concept levels of college athletes we can better understand their behavior in terms of injury frequency. Also, since it has been determined that the self concept of an individual is related to that individual's injury.
frequency, rehabilitation of the athlete’s psychological as well as physiological deficiencies should be conducted.

References
The Athletic Trainer’s Role in Drug Testing

Nathaniel E. P. Ehrlich, Esquire (ATC)
Edited by Don Kaverman

Over the past few years, there has been a phenomenal amount of attention focused on the use and abuse of drugs in the workplace and by the general public. There has been even more attention focused on the use and abuse of drugs by athletes. This paper will try to present a practical approach to the athletic trainer’s role in this evolving area of concern.

Almost daily, there is something in the sporting news involving an athlete’s involvement in either drugs or alcohol related incidents. Athletes have been convicted for criminally possessing, distributing and utilizing illegal drugs in ever increasing numbers. There have been reports of athletes utilizing performance enhancement drugs at all levels of competition, including high school. As athletic trainers, our concern is for the health and well being of the athlete. There are those who advocate drug testing as a means to eliminate or reduce drug-related problems. Others feel that only those who come forward should be helped. There are complex legal questions as to whether drug testing is appropriate in an athletic/academic setting and how it should be implemented. There are even more complex issues at the professional level. Whether an athletic trainer should or should not test is something which has to be decided on an individual basis after consultation with drug counselors, attorneys and team physicians.

Assuming that the decision has been made to implement a drug testing program, it is imperative that athletic trainers divorce themselves as much as possible from the actual testing phase of a program. Their rapport and relationship with the athletes should not be tainted by the drug testing process. They should serve as educators, not detectives. Consequently, they should not do the actual testing or sample collection, nor should they decide who should be tested. Involvement in these areas can only cause an athlete to question the athletic trainer’s loyalty and can only link them to the detective role. The damage to the athletic trainer’s role as a confidant can be forever tarnished. For the same reason, they should not be involved in imposing or enforcing sanctions.

They should, however, be involved in the development of the overall drug education program. The athletic trainer should receive test results and should make certain that those results remain confidential. They should make certain that athletes who test positive receive the appropriate counseling. Athletic trainers should observe the athletes with whom they work to try and detect any abnormal behavior which would indicate drug use or abuse. As a trained observer they should note differences in an athlete’s behavior, including tardiness, change in attitude or appearance.

When a testing program is implemented, there are certain things which should be of concern to the designer of that program. An in-house test is probably not acceptable since it is susceptible to many variables. In-house tests are extremely primitive despite their sophisticated appearances. In-house tests are not reliable and are subject to a variety of factors which can create error. Most athletic trainers are not qualified toxicologists, pharmacologists or lab technicians and, therefore, operator error is a very real problem, since they are not truly prepared to implement the actual testing. In addition, they do not perform drug testing on a frequent enough basis to allow them to become experts in that field. The in-house test mechanisms are, at best, primitive and at worst, unreliable. Furthermore, they are more expensive than they appear at first blush and are time consuming.

Assuming the athletic trainer has decided to utilize an off-site laboratory, there are certain things which should be of concern to the designer of that program. An in-house test is probably not acceptable since it is susceptible to many variables. In-house tests are extremely primitive despite their sophisticated appearances. In-house tests are not reliable and are subject to a variety of factors which can create error. Most athletic trainers are not qualified toxicologists, pharmacologists or lab technicians and, therefore, operator error is a very real problem, since they are not truly prepared to implement the actual testing. In addition, they do not perform drug testing on a frequent enough basis to allow them to become experts in that field. The in-house test mechanisms are, at best, primitive and at worst, unreliable. Furthermore, they are more expensive than they appear at first blush and are time consuming.

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Mr. Ehrlich is a certified athletic trainer and an attorney who specializes in medical/malpractice defense litigation and representation of professional athletes. He is currently with the firm of Post and Schell, 1800 JFK Boulevard, Philadelphia, Pennsylvania 19103.
should be rejected as unacceptable.

Immunoassay is the most common technique utilized in drug testing today. There are two types of immunoassays, enzyme immunoassay (EIA) and radioimmunoassay (RIA). These methods are more sensitive and give a more definite test result. Most labs use this as their first level of testing, and this is the type of testing which is found in most in-house tests as well. The immunoassay test is created by a reaction of an antiserum to a particular compound tested against a sample. The antiserum is mixed with the athlete's sample, and the antiserum reacts with the drug in the sample. The amount of free antiserum remaining is measured to determine the amount of drug in the athlete's sample. These tests are not fool proof. They are subject to error, and any positive test should be confirmed by running the sample again through the immunoassay and then by testing with some sort of chromatography, preferably gas chromatography and mass spectrometry. The cost for an immunoassay test ranges from $30.00 to $200.00 for each test. The price varies with the scope of the test and the sensitivity of the test and the laboratory. Immunoassay systems cannot test for steroids.

The most accurate testing method is the gas chromatography/mass spectrometry. This is also the only test which the courts have recognized as legally admissible in a court proceeding because of its reliability. Chromatography is not usually utilized for initial screening because of the expense involved. Usually, some form of chromatography will only be utilized after the athlete has tested positive with another test. In gas chromatography/mass spectrometry, molecules in the sample are isolated utilizing the chromatograph and are then analyzed with a beam of electrons. The molecules produce a spectrum which is different for each compound. In essence, each compound has its own fingerprint. The cost for chromatography ranges from $100.00 per positive test upward. The testing for steroids can only be performed by chromatography and ranges from $100.00 to $300.00 per test.

It is important to understand that urine tests for drugs only determine whether a person has used the drug recently or frequently. They cannot tell you, with certainty, just how recently or the degree of impairment, if any, at the time the sample was taken. The amount of time a drug is detectable in body fluids depends on the drug used, its purity, how often the person uses it, and the user's age, weight and metabolism. For example, marijuana constituents can show up in a urine test many days or weeks after the last use particularly in frequent or chronic users, whereas cocaine is usually undetectable within two days. Steroids may be detected for several months.

No matter how accurate a testing method is, there will always be a certain small number of incorrect test results. These fall into two categories: false positives (urine specimens which are actually drug free), and false negatives (samples which do contain a drug). Good laboratories build checks and balances into their systems to catch such analytical errors before the results are reported.

A false positive is more undesirable because it can result in unjustified action against an individual. The possibility of false positive results from laboratory or technical error is greatly reduced, however, by the confirming of all positives with an alternate method which is more sensitive and specific. A good laboratory also strives to avoid false negative, however, because they can allow drug users to go undetected, posing threats to themselves and others.

False results are not only caused by problems with the urinalysis itself, they may also occur if specimens are accidentally switched at the collection point or in the laboratory, or if the sample is tampered with. Errors in reporting results may also occur. The program must give attention to those potential problems in order to ensure accuracy in the urine testing program.

A key element of any program will be the laboratory which will do the testing. Since the athletic trainer must have a working relationship with the laboratory during the testing, there are certain things which should be considered:

(a) the lab's testing volume and experience; (The athletic trainer should make certain that the laboratory has the ability and willingness to test single athletes on very short notice. They must also have the ability to be able to test a large number of athletes quickly and efficiently so that pre-season screenings, if warranted, can be performed efficiently. Furthermore, many labs, such as those in hospitals, do not routinely perform drug screens or do them in large numbers and probably should not be used.)
(b) the method used for screening and confirmation;
(c) the type of drugs the lab detects;
(d) the quality control of the lab;
(e) chain of custody procedures and documentation; (Without this, specimens cannot be linked definitively to an athlete, making the test useless.)
(f) sample retention;
(g) the support the lab will provide in the event of a lawsuit;
(h) the time within which the lab can provide test results; and,
(i) the cost.

In deciding which laboratory to utilize, it is important to consider whether the laboratory will maintain the required confidentiality necessary to make any program work.

An off-site lab should use an immunoassay test method as the preliminary test. Any positive test should be rerun through the immunoassay system as part of the initial cost. Any positive test after that should be checked using some sort of chromatography. Simply running the test back through the immunoassay system is not sufficient. As part of the cost of the initial screen, many laboratories will include the price of the check for a positive result using chromatography. Other labs charge upwards of $100.00 per test to confirm a positive test by another method.

In conclusion, it is clear that any successful drug testing program must be formulated in such a way as to be both legal and helpful. The program should be designed in such a way as to allow the athletic trainer to provide the maximum benefit of his or her services to the players. The program should be designed so the athletic trainer is not involved in the day to day, hands on testing, but remains the confidant and support for the player. The lab used should have the facilities which meet the program's need while at the same time being effective. Under any system, confidentiality should never be jeopardized. Ultimately, the goal of any testing program should be to educate and protect the athlete's well being. @

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Hyperextension Taping For Soccer Goalies

Leigh Ann Dinkler, LAT, ATC

Hyperextension injuries to the metacarpophalangeal joints of the fingers seem to be common to soccer goalies. Knowing that gloves must be worn, I was faced with the challenge of designing a method of taping to prevent hyperextension, but still allow individual mobility of the fingers.

The hand is sprayed first with quick drying adherent and an anchor strip of 1/2 inch white tape applied, circling twice around the metacarpals. An anchor strip, 3/4 inch wide, is also applied between the proximal interphalangeal and distal phalangeal joints of each finger affected. (Figure 1)

Two strips, 1/4 inch wide, are attached at the distal anchor and held in place with a finishing strip 3/4 inch wide. After setting the fingers comfortably and functionally into flexion, the two 1/4 strips are crossed and connected to the metacarpal anchor strip. (Figure 2) The thin strips are held in place with a 1/2 inch strip, circling again around the metacarpals. Finally, a thin strip is applied on each finger taped, between the metacarpophalangeal and the proximal interphalangeal joints, holding the crosses strips in place. (Figure 3)

This taping was used on a varsity high school soccer goalie for a majority of the scholastic season, preventing re-injury. It could also be utilized for support under the glove of a softball or baseball player, and easily replicated by the athlete when needed, for participation in non-scholastic, recreational games. ©

Ms. Dinkler is the Athletic Trainer at Hamilton West High School, Trenton, New Jersey.
A Tip From the Field

Alternative to Shoulder Girdle Protection

Dave Carrier, MA, ATC

Today's football shoulder pads are highly protective. They are designed to absorb and disperse tremendous amounts of shock upon impact to the anterior, posterior and superior aspects of the shoulder girdle.

Because of their design, football shoulder pads afford the athlete limited amount of protection to the lateral aspect of the shoulder girdle. Many shoulder girdle and proximal upper arm injuries which occur in football are sustained by a lateral blow. The injuries vary in nature as the result of this mechanism. A few of the more prevalent injuries with this mechanism are acromioclavicular, coracoclavicular, coracoacromial sprains and proximal upper arm contusions. There are other types of injuries that occur to the lateral aspect of the shoulder but those noted injuries are sustained with greater frequency.

With the number of these shoulder girdle and proximal upper arm injuries occurring throughout the football season, athletic trainers have found themselves spending hours fabricating special pads to protect these areas. This author has found a way to assist in protecting the lateral aspect of the shoulder girdle without having to fabricate a special pad.

A pair of Jofa hockey shoulder pads were acquired (Figure 1). The shoulder pads are constructed of a lightweight material weighing approximately 20 ounces. By design these shoulder pads articulate well with the contour of the athlete's upper body (Figure 2). The shoulder pad's deltoid cap is concave and made of a hard plastic which, upon impact, supplies rigid protection to the shoulder girdle and deltoid areas (Figure 3). The proximal end of the deltoid cap is connected to the main body of the shoulder pads by an adjustable lace. This allows for proper alignment and a comfortable fit. The distal end of the deltoid cap is held in place by an elastic velcro strap. This maintains security and alignment of the pad without restricting the athlete during performance. The shoulder pad also has adjustable chest straps to insure proper fitting for any size athlete.

After properly fitting the athlete with the hockey shoulder pads, have the athlete put his football shoulder pads on. The football shoulder pads should fit properly over the hockey shoulder pads. The trainer should insure proper fitting by observing alignment of the pads (Figures 4 and 5). It is possible that a larger pair of football shoulder pads may be required.

The shoulder pad combination is a simple but effective way to supply additional protection to the shoulder girdle and proximal upper arm. The shoulder pad combination provides adequate protection without hindering the athlete's ability to perform (Figures 6 and 7).

Mr. Carrier is Assistant Athletic Trainer at Michigan State University, East Lansing, MI 48824.
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Las Vegas

It was a pleasure seeing so many athletic trainers and being a part of the largest national symposium ever held by the National Athletic Trainers Association. Hats off to the Convention Committee, Bill Chambers, convention chairman, Jerry Koloskie, host athletic trainer, and District 8 for such a fine meeting. I trust everyone left a winner.

Resignation

I would like to thank Don Kaverman (formerly of Ferris State College) for being our editor this past year. Don has moved to San Diego State as the Head Athletic Trainer and must concentrate on his new position. Good luck to you, Don, and again, thanks for all your help.

Thanks Bobby,
Congratulations Jerry

The Journal Committee wishes to thank Bobby Barton for his assistance and his dedication to the National Athletic Trainers Association over the past four years. The Journal Committee wishes the best to our newly elected President, Jerry Rhea.

Excellent Job

In keeping in line with the fine Public Relations campaign established by John LeGear and the Board of Directors, it now becomes necessary for the entire membership to promote the field of Athletic Training while educating the general public. Be proud of your invaluable contributions to the field of athletics.

Submit

Please submit to the Editor-in-Chief any questions, with or without answers, to our Question and Answer section pertaining to relevant topics in Athletic Training.

New Committee

Welcome to the Minority Athletic Trainers Committee chaired by Phil Horton, Head Athletic Trainer, Florida A&M University, Tallahassee, Florida. Please read the Committee Forum section regarding goals and committee members.

30th Edition

I sincerely appreciate the many contributions in making this 30th edition issue a success.

Thanks

It is with sadness I mention the passing of my close friend, Dr. Martin D. Delaney, Jr. He served as team physician for the Virginia Military Institute for more than fifty years, dedicating his medical skill and expertise to his beloved alma mater. He was a pioneer in the field of Sports Medicine who, incidentally, helped a very young athletic trainer establish many foundations on which to build his career. He will be missed but not forgotten.—Thank you Dr. Delaney for being my friend.

Closing

I was very pleased with the interest shown to me regarding the Journal while I was in Las Vegas. The Journal Committee is constantly striving to better present the publication of the profession we represent. Again this can only be accomplished through the membership’s participation and contributions. Keep up the good work. I would also like to thank the Board of Directors and the Journal Committee for their continued support. Have a healthy and successful fall.

SY (SSSA)

Letter to the Editor-in-Chief

Dear Mr. Yates,

In regard to your request for interesting information for the 30th Anniversary issue: Our gymnasium here at Chaffey College is named in honor of the first athletic trainer the school had: Earl “Sy” Sicosky. I feel privileged to work at a school that treats its trainers with such high regard.

Good luck with the special issue.

Sincerely,

John C. Barnes, ATC
Alto Loma, CA 91701

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National Office Notes

THE JOURNAL’S LOSS . . .

. . . is San Diego State’s gain. We must take a philosophical position at the leaving of our editor of only one year, Don Kaverman. Altruistically, we should send Don off to the new challenges and opportunities awaiting him on the west coast with only good wishes for great success. And we do! But selfishly we are saddened and disappointed to see the premature end to his creative and energetic approach to the editorship. Thankfully, Don will remain on the Journal Committee and we will continue to benefit from his innovative talents in that capacity.

CONTINUING EDUCATION

If you were placed on deficient status for failing to accumulate your Continuing Education requirement for the 1982-84 report period, you have until December 31, 1986, to make up that deficiency. You are also responsible for accumulating the 6.0 CEU requirement for this current 1985-87 CE period.

OPEN HOUSE

That’s what your National Office wants to be to you and we always have the welcome mat out. If you are in town or near-by for a sports event, we would be delighted to give you a tour of your Association’s facilities. These visitors “signed in” since our last publication: John Burney, Southern Guilford High School, Greensboro, NC; Joe and Marjorie Romo, Ocala, FL; David Douglas, Pittsburgh Pirates, Woodbridge, VA; James Jenkins, U.S. Army, Ft. Meade, MD; Bill Davis, Ohio State, Columbus, OH; Doug Calland and Flo Cottrell, University of Washington; Sam Miller, Lakeland, FL; Al Cujas, Burlington, NC; and the following from North Carolina State University at Raleigh, NC: David “Germ” Silver, Raleigh, NC; Bob and Libby Friday, Clemson’s, NC; Alan Blizzard, High Point, NC; Jackie Riley, Charlotte, NC; Jeri Ann Patrick, Hickory, NC; and Melissa Owens, Raleigh, NC. We hope a good time was had by all!

MEMBERSHIP

There will be a fee of $2.00 to request a replacement membership card. Send to the National Office, c/o Membership Office, Attention: Doris Stancill.

NEW CHAMPIONS

In our Spring issue we congratulated our (at that time) President-Elect Jerry Rhea as being “the best-dressed Certified Athletic Trainer in the NFC Western Division.” Jerry tells us that he has relinquished that title to Dean Kleinschmidt and Kevin Mangum. See the full story below in a reprint of a 1985 excerpt from Howard Balzer’s “Pro Football Focus” in The Sporting News. (We wish the picture could be in color!)

A Game of One-Upsmanship

Don’t be surprised if something outrageous happens when the Falcons play the Saints December 22 in New Orleans in the final game of the season. However, what occurs will involve the trainers, not the playing of the game.

A friendly rivalry between the trainers of the two clubs began two years ago. Saints trainer Dean Kleinschmidt and assistant Kevin Mangum ragged Jerry Rhea and Bill Brooks of the Falcons for wearing raggedy shirts at a game in New Orleans.

“We were really rubbing it in and giving them the raspberries,” Kleinschmidt recalled.

Last season, Rhea and Brooks arrived at the Superdome nattily attired in navy blue blazers, dress pants and yellow buttoned-down shirts. Not to be outdone, Kleinschmidt and Mangum wore tuxedos to the game played in Atlanta earlier this season. Adorning the outfits were gold ties and cummerbunds.

Said Kleinschmidt, “It was worth all the trouble to see the looks on their faces.” Kleinschmidt offered to call off the game of one-upsman ship, but the Falcons’ trainers wanted no part of that idea.

Rhea told Kleinschmidt, “I don’t know what we’re going to do because this is going to be hard to top. Maybe we’ll wear dresses.”

Kleinschmidt got a tip from a source in the Superdome office who said someone from the Falcons called, asking for permission to drive a limousine onto the field prior to kickoff.

But maybe that’s a smokescreen. Rhea and Brooks, though, are counting the days until their own finale.

GOOD-BYE - HELLO!

The National Office staff has been very fortunate in having two college students assisting in various areas during the summer vacation period.
Announcements

Ninth Annual N.A.T.A. Student Writing Contest

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

1. This contest is open to all undergraduate student members of the NATA.

2. Papers must be on a topic germane to the profession of athletic training and can be case reports, literature reviews, experimental reports, analysis of training room techniques, etc.

3. Entries must not have been published, nor be under consideration for publication by any journal.

4. The winning entry will receive a $100.00 cash prize and be published in Athletic Training with recognition as the winning entry in the Annual Student Writing Contest. One or more other entries may be given honorable mention status.

5. Entries must be written in journal manuscript form and adhere to all regulations set forth in the “Guide to Contributors” section of this issue of Athletic Training. It is suggested that before starting students read: Knight KL: Writing articles for the journal. Athletic Training 13:196-198, 1978. NOTE: A reprint of this article, along with other helpful hints, can be obtained by writing to the Writing Contest Committee Chairman at the address below.

6. Entries must be received by March 1. Announcement of the winner will be made at the Annual Convention and Clinical Symposium in June.

7. The Writing Contest Committee reserves the right to make no awards if in their opinion none of the entries is of sufficient quality to merit recognition.

8. An original and two copies must be received at the following address by March 1, 1986.

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A public service message from the Pharmaceutical Advertising Council and the Food and Drug Administration
The Use of the Kin-Com for the Treatment of Patellofemoral Dysfunction

Brian E. Hilty, MS, ATC
Richard A. Silver, MD
Julia K. Wilkinson, RPT

Since the late 1960’s and early 1970’s exercise devices have been available to isokinetically exercise antagonistic and protagonistic muscle groups concentrically. However, some researchers believed this was not enough. As early as 1956 scientists have suggested an instrument should be developed to monitor and measure eccentric and concentric forces in the human muscle (2). The Kin-Com fills this void in measuring eccentric contractions of a human muscle. The Kin-Com (3) is a computer controlled strength training and testing device that accurately measures eccentric and concentric forces developed by contracting skeletal muscles.

Preliminary results using the Kin-Com for patellofemoral dysfunction have found patients returning to pain free activity in 1 to 10 treatments. Strength (as defined by power to quadriceps muscles) increased on the average 100% for concentric contraction after 10 treatments and 200% for eccentric contraction after 10 treatments. The following case history gives an example of using eccentrics along with concentrics in rehabilitating patellofemoral dysfunction.

A 15 year old adolescent female was referred to the Sports Medicine Clinic of Tucson because of recurring right patellofemoral knee pain during any recreational activity such as racquetball or running. The knee pain started approximately two years ago and had progressed to where night pain was occurring. Her chief complaint was constant pain during physical activity.

Gross physical examination of the right knee revealed no warmth, effusion or ecchymosis to be present. Active range of motion for flexion and extension were within normal limits. Lateral tracking of the patella was noted during quad setting along with crepitation and increased pain. The patient had bilateral genu recurvatum. A positive cinema sign was observed. Stress testing the ligaments of the right knee had found they were all within normal limits. A negative McMurray click and a negative Apley compression test were noted on examination. Bilateral vastus medialis hypotonia was also observed with mild quadriceps insufficiency syndrome. A conservative treatment program consisting of I.C.E., electrical stimulation to the vastus medialis muscle and three position quad sets were initiated. When no decrease in signs and symptoms were noted at the end of five consecutive daily treatment sessions, the patient began isokinetic resistant exercises on the Kin-Com. The guidelines for testing and training on the Kin-Com were adopted from Bennett (1).

The active range of motion tested and trained was -15 degrees to -45 degrees of knee extension, which was the beginning of pain free active range of motion. The training regimen per exercises bout was the following:

- 3 x 10 repetitions at 20°/sec
- 3 x 10 repetitions at 60°/sec
- 3 x 10 repetitions at 90°/sec

Rest intervals were established by the subject. Before each exercise bout a warm up period consisting of five minutes of stationary bicycle riding was performed. During training and testing the patient was encouraged to use maximal force during each exercise bout.

The right and left knee extensors were tested on the Kin-Com on October 8, 1985, using 1 x 5 repetitions at 20°/sec (see Test 1, Table 1). At the end of six training sessions (3 times per week for 2 weeks) the patient reported pain and discomfort in the right knee had disappeared and the left knee was hurting. Gross physical examination of the right knee revealed no warmth, effusion or ecchymosis to be present. Active range of motion for flexion and extension were within normal limits. Lateral tracking of the patella was noted during quad setting along with crepitation and increased pain. The patient had bilateral genu recurvatum. A positive cinema sign was observed. Stress testing the ligaments of the right knee had found they were all within normal limits. A negative McMurray click and a negative Apley compression test were noted on examination. Bilateral vastus medialis hypotonia was also observed with mild quadriceps insufficiency syndrome. A conservative treatment program consisting of I.C.E., electrical stimulation to the vastus medialis muscle and three position quad sets were initiated. When no decrease in signs and symptoms were noted at the end of five consecutive daily treatment sessions, the patient began isokinetic resistant exercises on the Kin-Com. The guidelines for testing and training on the Kin-Com were adopted from Bennett (1).

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Four more treatment sessions were done every other day. A total of ten treatment sessions on the right knee...
and four sessions on the left knee were done over a three week period of time. On November 1, 1985, the patient dropped out of the treatment program on her own when her knees stopped bothering during daily activity and sports participation. She was not able to have the final test done until December 5, 1985, because of scheduling problems (see Test 2, Table 1).

**TABLE 1**

Kin-Com Average Power Comparison

<table>
<thead>
<tr>
<th>TEST</th>
<th>AVERAGE (WATTS)</th>
<th>LEFT:RIGHT</th>
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<tbody>
<tr>
<td>1</td>
<td></td>
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</tr>
<tr>
<td>Left/Con*</td>
<td>33.277</td>
<td>71.16% R</td>
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<td>Left/Ecc*</td>
<td>12.404</td>
<td>91.85% R</td>
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<td>Right/Con*</td>
<td>46.761</td>
<td>140.5% L</td>
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<td>Right/Ecc*</td>
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<td>108.8% L</td>
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<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Left/Con*</td>
<td>69.422</td>
<td>105.8% R</td>
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<td>Left/Ecc*</td>
<td>45.858</td>
<td>128.8% R</td>
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<td>Right/Con*</td>
<td>65.583</td>
<td>94.47% L</td>
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<td>Right/Ecc*</td>
<td>35.599</td>
<td>77.62% L</td>
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<td>Left/Con*</td>
<td>52.744</td>
<td>125.0% R</td>
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<tr>
<td>Left/Ecc*</td>
<td>33.479</td>
<td>103.6% R</td>
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<tr>
<td>Right/Con*</td>
<td>42.181</td>
<td>79.97% L</td>
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<tr>
<td>Right/Ecc*</td>
<td>32.293</td>
<td>96.45% L</td>
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* Con = Concentric contraction of knee extensors
* Ecc = Eccentric contraction of knee extensors

The patient was seen again in follow up on May 15, 1986. The clinical physical examination revealed no warmth, ecchymosis, effusion nor point tenderness to be present during palpation. Anthropometric girth measurements taken showed no marked atrophy of the quadriceps mechanism bilaterally. The patient’s patella tracked laterally on the right knee with no crepitation present during quad setting. Active range of motion measurements taken were found to be within normal limits bilaterally. The patient reported continued pain free activity during all daily activities and sports participation. She had not been on a regular exercise program for her knee as instructed since she stopped coming to therapy. This would explain her decrease in power (see Test 3, Table 1).

The Kin-Com offers a powerful tool in the rehabilitation of patellofemoral injuries. The athlete in this case history returned to sports participation pain free in three weeks once Kin-Com rehabilitation started. The most dramatic incidence was the power increases. Her left knee extensor power increased by 200% concentrically and by 370% eccentrically after only four exercise treatments and a four week delay in final testing! When researchers believe it takes 6-12 weeks of exercise for significant increases in strength to occur, that is quite an accomplishment. With the Kin-Com, one has the ability to significantly reduce the time lost due to patellofemoral problems. Since the Kin-Com is one of the few machines available today that measures and trains the eccentric contraction of a muscle, eccentric exercise of a muscle may be the answer to significantly reduce rehabilitation time for patellofemoral dysfunction. More research is needed in this complex area.

continued on page 253

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Activities

David G. Yeo, ATC, DPE

It is with great pride that the NATA presents its annual awards and scholarships at the NATA Convention in June. At the Awards Banquet, prominent leaders within the profession are honored for their significant and continued contributions, initiative, and dedicated years of service. Outstanding young men and women who are currently enrolled in athletic training programs are awarded scholarships in recognition of their excellent performance and potential. To these established professionals and to these future leaders, the Journal extends the sincere thanks and congratulations of the entire NATA membership. The sacrifice and commitment the awards represent serve to inspire others within the profession.

George Sullivan, Chairman of the NATA Honor Awards Committee, and Frank George, Chairman of the NATA Grants and Scholarships Committee, as well as their respective committee members, deserve our sincere thanks and appreciation for their diligent efforts in coordinating these awards.

NATIONAL ATHLETIC TRAINERS’ ASSOCIATION HALL OF FAME - 1986

Edward Raymond Abramowski, District 2
Henry L. “Buck” Andel, District 9
George C. Anderson, District 8
Chester A. Grant, District 3
Eugene I. Harvey, District 9
Carl Edmund Nelson, District 1
Curtis Roy Roylander, District 2
William C. Samko, District 1
Fred A. Wappel, District 5

NATA 25-YEAR AWARD RECIPIENTS FOR 1986

Robert S. Behnke, Indiana State University
Richard M. Burkholder, Carlisle, Pennsylvania
Thomas W. Couch, Davidson College
Phillip B. Donley, West Chester State College
Donald E. Frey, University of Pennsylvania
Douglas Frey, Drexel University
Joe Gieck, University of Virginia
Fred Kelly, Dartmouth College
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Edward Kwest, University of Dayton
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George E. Menefee, Los Angeles Rams
John Perego, Princeton University
Joseph L. Proski, Phoenix, Arizona
Jack Rea, Jr., Rohnert Park, California
Thomas E. Simmons, La Jolla, California
John C. Wells, University of NC-Ashville
William Wiedergott, Southboro, Massachusetts
Al Wilson, Kileen High School
Troy Young, Arizona State University
Paul Zeek, Lamar University

PRESIDENT’S CHALLENGE CUP AWARD

Robert K. Kerlan, MD, Los Angeles, California

HONORARY MEMBERSHIP RECIPIENTS, 1953-1986

Fred L. Allman, Jr., M.D.
Robert E. Anderson, M.D.
James Rheuben Andrews, M.D.
David Arnold
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Walter Byers

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William G. Clancy, Jr., M.D.
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Mike Close
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R.W. “Red” Covington, M.D.
Charles “Chuck” Cramer
Jack Cramer
G. Edward Crane, M.D.
NATIONAL ATHLETIC TRAINERS’ ASSOCIATION
TWENTY-FIVE YEAR AWARDS 1954-1986

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<th>Name</th>
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<td>Harold J. “Blackie” Blackwell</td>
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<td>Frances J. “Pucky” Boyle</td>
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<td>LeRoy J. “Brandy” Brandimore</td>
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<td>Martin J. “Marty” Broussard</td>
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<td>William Howell “Bill” Chambers</td>
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<tr>
<td>George Henry Christman, Jr.</td>
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<td>Prosper P. Cima, Sr.</td>
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M.J. "Mickey" O'Brien
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Gayle B. "Robie" Robinson
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Joseph "Joe" Romo
Leon E. "Red" Romo
* John R. Rourke
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C. Roy Rylander
William C. Sandlin
* Davis Sandlin "Sandy" Sandlin
* Allan "Al" Sawdy
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Rudolph "Rudy" Schneider
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Frank Semanick
Sherron W. Shaw
James D. Sheehan
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* John "Red" Slagle
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John F. "Jeff" Snedeker
* Robert R. "Bob" Spackman
Michael A. Stang
Joseph J. Stanitis
Francis "Biff" Stannard
Lloyd "Snapper" Stein

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* Francis J. Sheridan
Thomas E. Simmons
Robert W. Sinkler
* John "Red" Slagle
Andrew Siveas
John F. "Jeff" Snedeker
* Robert R. "Bob" Spackman
Michael A. Stang
Joseph J. Stanitis
Francis "Biff" Stannard
Lloyd "Snapper" Stein

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* Edward Block
* Wilbur H. S. Bohn
* Frances J. "Puckey" Boyle
* Martin J. "Marty" Broussard
* Delmer Brown
* Elmer Brown
* Robert Kenneth "Bobby" Brown
* David M. Bullock
* Edward A. Byrne
* Michael A. Chamber
* William Howell Chambers
* Earl "Click" Clark
* Richard Kent Cole
* E. Jamey Colville
* James "T. Jim" Conboy
* Edward A. Coppola
* Charles "Chuck" Cramer
* Franny Cramer
* Lewis Clair Crowl
* Otho Leroy Davis
* Oliver William "Bill" Dayton
* Charles O'Neill "Chuck" Demers
* Oliver J. "Ollie" DeVicet
* Arthur D. Dickinson, Sr.

* Lorain F. "Tow" Dieh
 Lilburn J. Dimmitt
* Dwayne F. "Spike" Dixon
* James Ezzell "Doc" Dodson
* Anthony Frank "Tony" Dougal
* Elvin C. "Ducky" Drake
* Carl Erickson
* William J. Fallon
* Donald James Fauls
* William "Bill" Farrell
* James Henry Goostree
* Tad Gormley
* Chester A. Grant
* Louis Karmen "Doc" Grevelle
* Walter A. "Grock" Grockowski
* Robert Henry "Bobby" Gunn
* Albert C. "Whitey" Gwynne
* Charles E. "Smoky" Harper
* Eugene Harvey
* Thomas E. Healoni
* Jack Hepinstall
* Fred W. Hoover
* Milford Kenneth "Kenny" Howard
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* Lincoln T. "Tom" Kimura
* Wesley I. "Doc" Knight
* John Edward Lacey
* Edward B. "Eddie" Lane
* Robert A. "Bobby" Lane
* Samuel Randall Lankford
* Mike Lankovich
* William E. "Doc" Lindsey
* James W. Littlejohn
* Roland "Kickapoo" Logan
* Larry L. Lohr
* Duane A. "Doc" Stober
* George Stockwell
* Edward A. Sulkowski
* Burt F. Sullivan
* George "Golden" "Sully" Sullivan
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* Charles W. "Doc" Turner
* Raymond V. Ulinski
* Seymour Van Blake
* Richard E. Vanvoort
* Bruce E. Vogelsgang
* Wayne P. Wagner
* Howard E. Waite
* Stanley M. Wallace
* Fred A. Wargo
* Jack C. Ward
* Richard A. Wargo
* Richard Wallace "Dick" Waterman
* Robert Edward "Bob" Weingart
* John C. Wells
* Raymond O. "Ray" West
* Robert C. White
* Frank John Wiechec
* William Wiedergott
* William Louis "Bill" Wild
* Lewis H. Williams
* Jack Williamson
* Al Wilson
* Billy B. Wilson
* Thomas D. Wilson, Jr.
* Stephen E. Witkowski
* Edward J. "Eddie" Wojcik
* Joe L. Worden
* Herman Wrigley
* Alfred J. "Duke" Wyre
* Troy L. Young
* Fred J. Zamborletti
* Edward Zanfrini
* Paul T. Zeek

* Deceased

Volume 21 Number 3 — Fall 1986 • Athletic Training 241
Gieck Receives Distinguished Athletic Training Educator Award

Dr. Joe Gieck, Assistant Professor and Head Trainer at the University of Virginia, is the third recipient of the Sayers J. Miller, Jr. Distinguished Athletic Training Educator Award. Previous recipients were William E. “Pinky” Newell and Phil Donley. Because of the extremely high esteem of this NATA award, it is a privilege to summarize some of Gieck’s contributions to athletic training education.

Gieck graduated from the University of Oklahoma with a B.S. in Physical Therapy. After serving as the Assistant Trainer at the U.S. Military Academy for one year, Gieck became the Head Trainer at the University of Virginia, a position he has held since 1962. At the University he earned his Masters degree in Physical Education and his Doctorate in Counselor Education, with his dissertation being “Development of Guidelines for a Curriculum for Athletic Trainers.” At the University of Virginia Gieck has served as an Assistant Professor in the School of Education, an Assistant Professor of Orthopaedics and Rehabilitation, and from 1975 to June of 1986, he was the Curriculum Director for the Master’s program in Athletic Training. Additional teaching experience has been as a clinical instructor in physical therapy at Oklahoma, Duke, and the University of Wisconsin.

Gieck has distinguished himself as a prolific writer and renowned speaker. His 70 publications have done much to further athletic training education, through research studies, text books, case studies, and professional recommendations. Of special interest to Gieck are areas involving hand injuries, modalities, the shoulder, and professional issues of burnout, roles, and certification. In the last ten years Gieck has made more than 100 presentations at scientific meetings and numerous associations, with frequent appearances at the prestigious Dogwood, Garden State, and Georgetown Symposia, UVA medical programs, NATA District and Annual Meetings, as well as annual conventions of the AOSSM, APTA, and American Academy of Orthopaedic Surgeons. Gieck continues to play a major role in his Art and Science of Sports Medicine Symposium at the University of Virginia.

Gieck has served as trainer for the U.S. Pan Am Games, the U.S. Olympic Basketball Development Camp, four All-Star Lacrosse programs, and several Virginia High School All-Star Games. As a physical therapist he has worked with the University of Virginia Student Health program since 1962, and has served as a physical fitness consultant to the Federal Executive Institute.

Outstanding contributions have been made to the NATA as District 3 Secretary-Treasurer, and through service as a member of the Board of Directors, 25-Year Awards Committee, Certification Committee, and the Editorial Board of Athletic Training. Currently, Gieck is the liaison to the American Orthopaedic Society of Sports Medicine.

Among Gieck’s numerous honors are: Distinguished Service Awards from the National High School Athletic Coaches Association, the National Federation of Interscholastic Officials, the Medical Society of Virginia, and the Virginia High School Coaches Association. He has been an item writer for the certification exams of the NATA and the American Physical Therapy Association, and was honored as the NATA College Athletic Trainer of the Year in 1979. Of tremendous significance is Gieck’s leadership as the coordinator of the Virginia Athletic Training and Licensing Bill.

With over 26 years of outstanding service and dedication to athletic training education, Joe Gieck has received the highest accolade with this Distinguished Athletic Training Educator Award. The NATA takes tremendous pride in recognizing Joe Gieck’s exemplary achievements and contributions and wishes him well in the years ahead.

* * *

Carol A. Gambell, ATC, has joined Orthopedic Technologies, Inc. in Syracuse, NY as an orthotic technician. With a B.S. from Concordia University (Montreal) and a Masters in Sports Management at the University of Richmond, Gambell will handle duties related to fittings, and develop activities in the area of sports injuries treatment.

* * *

Dr. William E. Prentice, Jr., ATC, and Assistant Professor of Physical Education at the University of North Carolina, Chapel Hill, has become a member of Campbell’s Institute for Health and Fitness Advisory Board. The Board consults with Campbell’s Institute for Health and Fitness on matters related to the development of research and dissemination of information on exercise, nutrition, and other areas of lifestyle.

* * *

David “Pat” Connelly, ATC, has been inducted into the Ohio House of Representatives’ City League Hall of Fame. Connelly received this distinguished citizen award for his 25 years of dedicated service as a physical therapist and athletic trainer for the University of Toledo and 20 area high schools.

* * *

Fred J. Turner, ATC, RPT, has been inducted into Illinois Athletic Trainers Association Hall of Fame. Turner has served as athletic trainer at four south Chicago suburban high schools and is President of the Physical Therapy and Sports Injury Rehabilitation Clinic in Hazelcrest, IL.
The EATA congratulates the recipients of the 1986 EATA Scholarship Awards, as follows:

Michael Frawley (Bridgewater State) - Joe Abraham Award, District I
Mary Ellen Mandy (Ithaca College) - Joe Abraham Award, District II
Brian Spellacy (Springfield College) - Kassabian-Ideal Tape Award
John A. Jones (University of Pittsburgh) - Micro Bio-Medics Award

NATA President Bobby Barton represented the Kentucky Athletic Trainers Society at the recent signing of House Bill 219. Governor Martha Layne Collins signed the bill with Barton and Representative Jim LeMaster attending the conference. K.A.T.S. President Jerry May and LeMaster championed the new law through the legislative process. May was at the NCAA Final Four and could not attend the signing ceremony. Congratulations, Jerry, on your new law and championship.

Three Receive Special Recognition At District IV Meeting in March

Three members of the NATA, Inc. received special recognition recently at the District IV meeting in Grand Rapids, Michigan this past March. Each has been a valuable asset to the NATA, Inc., especially in the state of Michigan. The recipients of honorary membership into M.A.T.S., Inc. are Kent Falb of the Detroit Lions; Bob White of Wayne State University, and Jack Jones, formerly of Western Michigan University.

Kent Falb began his career in athletic training at the United States Military Academy at West Point. The Elgin, Iowa native then entered the University of Iowa and was graduated from that institution in 1963. While at Iowa, he worked part-time with the Minnesota Vikings. In 1965, he was named the Head Athletic Trainer at Boston College. He held this position until 1967 when he began working for the Detroit Lions.

Bob White, a native Michigander, was graduated from Eastern Michigan University in 1949. He came to Wayne State in 1950 and is currently the Head Athletic Trainer and an Associate Professor. The multi-talented Bob White is also the current president of The National Operating Committee on Standards for Athletic Equipment (N.O.C.S.A.E.).

Jack Jones, a native Texan, was graduated from The University of Texas in 1950. After being recalled into the air Force in 1951, Jack served as Head Athletic Trainer at Baylor and Southern Illinois before assuming the same position at Western Michigan in 1956. He held this position until 1984. Jack currently is working at a Sports Medicine Clinic in Austin, Texas.

Congratulations to each of you for a job well done. Thank you each for your continued efforts to improve our profession, both on a local and a national scale.

A. J. Duffy, of the University of Michigan, has been appointed a Liaison to State Athletic Trainers Organization for the Michigan Athletic Trainers Society, Inc. He welcomes any contact with state organizations across the country to help open up communications at the grass roots level. His address is: A. J. Duffy, ATC, PT, The University of Michigan, Athletic Department, 1000 South State Street, Ann Arbor, MI 48109-2201.

The signing of LB 355, Licensure of Athletic Trainers in Nebraska. In Governor's Office, April, 1986. George F. Sullivan, ATC, PT, Head Trainer, University of Nebraska, Lincoln, NE and Robert Kerrey, Governor, State of Nebraska.

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Calendar of Events

Jeff Fair, ATC, MS, CCT

September
20-21 Intermediate Cybex/Isokinetic Course, La Crosse, WI. Contact Orthopaedic and Sports Physical Therapy, 505 King Street, Suite 001, La Crosse, WI 54601.

22-26 XXIII FIMS World Congress of Sports Medicine, Brisbane, Queensland, Australia. Contact World Congress Secretariat, Box 371, Paddington, Queensland 4064, Australia.

24-28 Cybex Sponsored Isokinetics Seminar, Las Vegas, NV. Contact Cybex, 2100 Smithtown Avenue, Ronkonkoma, NY 11779.

26-27 Sports Nutrition Intensive Workshop, Orlando, FL. Contact 830 Boylston Street, Brookline, MA 02167.

27-28 International Health and Fitness Conference/International Sports Trainers Conference, Brisbane, Queensland, Australia. Contact World Congress Secretariat, Box 371, Paddington, Queensland 4064, Australia.

29-Oct. 2 American Academy of Family Physicians Annual Meeting, Washington, DC.

October

3-5 First Annual Wellness Seminar Sponsored by the Heart Institute of Nevada, Las Vegas, NV. Contact Lois Seideman, 2759 Seabridge Drive, Las Vegas, NV 89121.

15-18 La Crosse Health and Sports Science Symposium, La Crosse, WI. Contact La Crosse Exercise and Health Program, 221 Mitchell Hall/UWL, La Crosse, WI 54601.

16-18 Pre-Symposium Workshops and Clinical Forum on Cardiology and Rehabilitation, La Crosse, WI. Contact Philip K. Wilson, Executive Director, La Crosse Exercise and Health Program, 221 Mitchell Hall/UWL, La Crosse, WI 54601.

18-21 American Dental Association Annual Meeting, Miami Beach, FL.


18-24 American Congress of Rehabilitation Medicine, Baltimore, MD.

20-23 National Safety Council Annual Meeting, Chicago, IL.

21-26 American College of Surgeons Annual Meeting, New Orleans, LA.

23-24 11th Annual Meeting of the Northland Chapter of the American College of Sports Medicine, Grand Forks, ND. Contact John Kelly, Department of Health and Physical Education, Halenbeck Hall, St. Cloud University, St. Cloud, MN 56301.


27-31 American Dietetic Association Annual Meeting, Las Vegas, NV.

31-Nov. 3 3rd International Symposium on Sports Biology, Nice, France. Contact Docteur Pierre Marconnet, CROSCOMS, 181 Route de Grenoble, 06200 Nice, France.

November
1-6 American Academy of Pediatrics Annual Meeting, Washington, DC.

3-5 9th National Trauma Symposium, Baltimore, MD. Contact Patricia McAllister, MIESSH, 22 S. Greene Street, Baltimore, MD 21201.

3-7 American College of Sports Medicine Fitness Instructor Workshop and Certification, Garden City, NY. Contact Robert Otto, Human Performance Laboratory, Adelphi University, Garden City, NY 11530.

3-7 La Crosse Fitness and Weight Control, La Crosse, WI. Contact La Crosse Exercise Program, UWL, La Crosse, WI 54601.

6-9 Sports Medicine Seminar, White Sulphur Springs, WV. Contact George M. Converse, MD, Lloyd Noland Hospital and Health Centers, 701 Ridgeway Road, Fairfield, AL 35064.

9-13 25th Annual National Association of Physical Therapists, Waikiki Beach, HI. Contact NAPT, P.O. Box 367, West Covina, CA 91793.


10-14 La Crosse Cardiac Rehabilitation Workshop, La Crosse, WI. Contact La Crosse Exercise Program, UWL, La Crosse, WI 54601.

10-14 La Crosse Teaching Stress Management and Relaxation Skills, La Crosse, WI. Contact La Crosse Exercise Program, UWL, La Crosse, WI 54601.

13-15 Knee Rehabilitation Workshop, King of Prussia, PA. Contact Bob Engle, Center for Sports Physical Therapy, 1150 Berkshire Blvd., Wyomissing, PA 19610.

14-15 Sports Physical Therapy Course II, La Crosse, WI. Contact Orthopaedic and Sports Physical Therapy, 505 King Street, Suite 001, La Crosse, WI 54601.

25-28 6th Annual Sports Medicine Seminar “Sports Medicine - For All Practitioners”, Maui, HI. Contact Stuart Zeman, MD, Course Chairman, 2999 Regent Street, Suite 203, Berkeley, CA 94705.
Martin D. Delaney, Jr., M.D.
June 5, 1907 - March 11, 1986

Dr. Martin Delaney, Jr., team physician at the Virginia Military Institute, passed away on March 11, 1986, at the age of 78. A 1928 graduate of the Virginia Military Institute, he received his medical degree at Georgetown University before returning to serve VMI in 1934. During his 52 years as team physician, he was named an honorary member of the NATA for his support of the organization and elected a charter member of the VMI Sports Hall of Fame.

At the time of his death, Dr. Delaney was in private practice in Alexandria, Virginia. He is survived by his wife, Maude, eight children and seven grandchildren.

Dr. Delaney will be remembered for his love and dedication to his family, his school, and his profession.
The man given credit for the spirit that propelled Villanova to the 1985 NCAA Basketball championship has ended his struggle with a debilitating disease, but that spirit lives on in the field house renamed after him on campus two weeks prior to his death. So has Villanova honored Jake Nevin for his 56 years of service, for his loving dedication, for his humor, and for his gift of friendship.

Jake began his career at Haverford College, before becoming the trainer at Villanova in 1929. His mementoes included a large collection of trophies and medals that many of his athletes had won and then presented to him for his faith in them. He was inducted into the Villanova Hall of Fame in 1974 and the Philadelphia Big 5 Hall of Fame in 1984. On February 27, 1985, Villanova retired basketball Jersey Number 1 in his honor. He is a past 25 Year Award winner from the NATA.

Known for his practical jokes and one-liners, Jake didn't let anyone off the hook. He was cited by President Reagan at a reception for the NCAA Championship Team. The President addressed him saying, “Jake, I know how much you mean to this team and to all the students at Villanova. . . . . You've made your mark. And your personal courage has inspired greatness.” In the reception line Jake told the President, “It's your honor” (to meet me). Perhaps that's his legacy to us: no matter how much pressure the situation, or how much we think we've accomplished, let's not take ourselves too seriously.

The family requests that memorial donations be sent to the Jake Nevin Scholarship Fund, Villanova University Athletic Office, Villanova, PA 19085.
Isolated injury to the posterior cruciate ligament is a relatively uncommon occurrence. Treatment for this injury is often controversial and unreported. This paper examines such an injury and the manner in which it was handled.

A nineteen year old black male collegiate running back sustained an injury to his right knee during a contest. The athlete did not report the injury immediately and continued to finish the contest. The athlete presented himself the next day with noticeable stiffness. Range of motion to the knee was full and there was no clinical effusion. The athlete gave no history of previous knee pathology nor had the knee given way. Mechanism of injury was not clearly established at this time. All ligaments were stable in all planes tested. The athlete presented a negative drawer test, negative Lachman and no joint line tenderness. Pain was produced by full flexion of the knee and discomfort was limited to the posterior aspect only. Routine X-rays of the knee were negative.

The athlete was assumed to have had a strain of the posterior capsule with a minimal tear of the medial head of the gastrocnemius. Treatment consisted of ice and rest for the next 72 hours.

The athlete continued whirlpool therapy and light exercise until returning to activity. Complaints of pain in the posterior aspect continued. Upon a second examination it was revealed that the athlete had a slightly positive posterior drawer as well as a very slight posterior sag. It was found that the athlete was hit and landed on a flexed knee during the previous contest.

A decision was made to proceed with arthroscopy. During the arthoscopic examination, the posterior cruciate ligament (PCL) was found to be torn in its midsubstance. Further examination revealed no other structures to be involved and diagnosis was an isolated (PCL) tear. No repair or reconstruction was undertaken for this condition.

Therapy began one week postoperatively and consisted of cold whirlpools, muscle stimulation, complete range of motion exercises, including the use of an exercise bicycle to encourage movement. The athlete had 110 degrees of flexion and full extension at this time.

Therapy continued and quadriceps strengthening exercises were added. The athlete was responding well and strengthening exercises included the use of the Orthotron and weights. At two weeks postoperatively, the athlete had complete range of motion and strengthening exercises were progressing well. In the third week, the athlete had completed all requirements for return to activity and resumed normal practice.

At five months postoperatively, the athlete was tested on the Cybex dynamometer. Tests for tension development, power and endurance showed no deficit. Strength deficits showed a difference of 7% for his right quadriceps and 12% deficit for the right hamstrings. These deficits are very small and the athlete continues training.

Discussion

The (PCL) is designed to prevent anterior displacement of the femur on the tibia (1). The ligament is tensed on full flexion. Injuries to the (PCL) usually develop as an outcome of overflexion or a forceful landing in which the tibia is driven backwards on the femur (Figure 1). Another significant factor in the mechanism occurs when the foot is plantar flexed while the tibial tubercle strikes the ground. Injury to the (PCL) is considered rare (1,2,3,4). Repair and reconstruction of (PCL) tears is possible, but is a major surgical procedure. The rehabilitation is very demanding of the patient (4). Posterior cruciate tears which are avulsed from the tibia or femur are able to be repaired unlike midsubstance tears (Figure 2).
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Dave Tomasi,
Program Director for Athletic Training
Lock Haven University, Lock Haven, Pennsylvania
Potpourri

Dennis Aten, ATC, RPT, MS

Since I have been a member of the Journal Committee longer than anyone presently on the staff, it seems appropriate to reflect on the past in our 30th Anniversary issue.

I became a student member of the NAT A the first year the Journal was printed. I really don’t recall anything specific about it, since it was not much more than a newsletter. The quality developed slowly under the same trying circumstances of the organization it represented. Limited budgets, small membership, limited advertising, and few contributors all made the Journal’s growth and development slow. As we continued growing as a profession and grasping at maturity, the Journal kept pace. Many of you can’t recognize the amount of growth that has taken place and consequently can only be aware of the growth yet needed. As I try to look at our Journal objectively, I, too, can see much necessary growth and improvement; but what a joy to remember where it came, to the excellent service it provides today, and envision the maturity yet to come.

I hope you all can share with me the promise of the future of our profession as we celebrate 30 years of journalistic growth that has paralleled NAT A growth.

Dennis Aten

Under the Influence
Sports Nutrition News

Alcohol is a narcotic suppressant of the central nervous system. Prior to a workout or competition, one drink (12 oz. beer, 4 oz. wine, or 1 oz. 86-proof liquor) affects the brain’s control over reasoning and judgement. The athlete feels relaxed and less inhibited with transient sensations of courage, greater endurance and warmth. Another drink or two dramatically slows reaction time and impairs muscle reflexes and coordination — particularly the fine-motor skills required for racquet sports, gymnastics, hurdles, golf and field events.

Alcohol is absorbed into the bloodstream from the stomach and is distributed into the water compartments of every cell. This occurs more rapidly in lean lightweight athletes than in stouter ones. The detrimental effects will not dissipate until the liver has detoxified the alcohol. Although alcohol receives top priority over the metabolism of other nutrients, the clearance rate is constant at the equivalent of one can of beer per hour. Since the calories from alcohol generate heat and not muscle energy, there is no physiological value in trying to “walk off” the intoxicating effects. Coffee is not a remedy either. Caffeine will stimulate the central nervous system but it will not reverse drunkenness. Sobriety requires patience — at the liver’s rate of one can of beer per hour.

Alcohol cannot be practically considered for carbo-

hydrate loading. Even beer and wine are not wise choices. Compare:

<table>
<thead>
<tr>
<th>Grams Carbohydrate</th>
<th>Calories</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 oz Chablis 5 110</td>
<td>160 (135)</td>
</tr>
<tr>
<td>12 oz Michelob (Light) 16 (12)</td>
<td>160 (135)</td>
</tr>
<tr>
<td>8 oz orange juice 28</td>
<td>120</td>
</tr>
</tbody>
</table>

A caution about “light” beers: the calorie and alcoholic contents vary greatly from brand to brand. For example, Michelob Light is only 10 percent “lighter” than regular Budweiser and has nearly twice the amount of calories as Near Beer and other light varieties. Even the lower alcohol content of light beers will precipitate more frequent urination, which will aggravate an athlete’s dehydrated state after a race or workout. To optimize performance, avoid all forms of alcohol at least 24 hours prior to an event. Cheers!

Warning: Chewing May Be Dangerous to Your Health
Good Health Digest

Save your lungs by chewing your tobacco or using snuff. That’s the general drift to the promotion that preceded the current boom in sales of so-called smokeless tobacco products. An estimated 25% of high school and college males use the stuff and probably an even higher percentage of school-age jocks either dip or chew.

Researchers now say that, of heavy users of three years or more, 60% develop mouth lesions and there is evidence indicating that oral cancer may ultimately result.

Fasting - A Big Loser
Sports Nutrition News

Fasting — abstaining from food for one to three days — is occasionally practiced by some athletes desiring a “cleansing” experience or who want to lose weight quickly. Although athletes who fast often feel light, purified and euphoric, they also experience negative physiological effects that may be more harmful. When you abstain from food and its inherent vitamins, minerals, protein and carbohydrates, you continue to function normally by drawing upon your nutrient reserves. You utilize these nutrients but do not replace them.

Fasting not only drains vitamins and minerals, it also consumes energy reserves. According to Joseph Knapik (US Army Research Labs, Natick, MA), active people who fast one to three days deplete their glycogen stores (needed for hard exercise) and break down their muscles as an alternative fuel. Knapik studied the effect of a three-day fast on walking endurance. He found that the subjects had 18 percent less endurance after having fasted, and were able to maintain a brisk walk for only 120 minutes as compared to 140 minutes in a better fed state. In addition to reduced exercise performance, subjects relied more heavily on protein as an energy source, burning 40 percent more than in a fed state. Knapik suspects they broke down protein from their muscles and liver since these are the body’s largest protein reserves. This tissue breakdown is another example of how fasting depletes, rather than restores, the body.

People who fast to lose weight generally have poor success. They tend to regain the weight quickly because fasting contributes to certain biochemical changes that encourage weight gain. One change relates to an enzyme called lipoprotein lipase, LPL, which helps fat cells take up fats from the blood. After fasting, LPL becomes more
active and seemingly tries to replace all of the lost fat. Research with rats indicates that LPL becomes less active only when the fat cells are well refilled. This may explain why people who lose weight quickly on a fast also tend to regain it quickly. Another reason for this rapid gain relates to water weight: much of the weight lost in fasting is water weight. When you eat, you restore water in your body and regain the weight.

Walking Vs. Running
Food and Nutrition News

Although more kilocalories are expended to run a given distance than to walk the same distance, how fast a person walks or runs — except for extremely fast or slow paces — has little effect on caloric expenditures. According to Bary A. Franklin, Ph.D. and Melvin Rubenfire, M.M., who wrote on "Losing weight through exercise" in the Journal of the American Medical Association (July 25, 1980), walking has a gross calorie cost of approximately 1.15 kcal/kg/km, running 1.70 kcal/kg/km. Walking a longer distance can provide a substantial energy expenditure, a worthwhile consideration — especially for the obese, elderly, or other persons who are not able to run.

Sugar Boost Lets You Down
Good Health Digest

Eating sugar immediately before exercise inhibits athletic endurance, according to a report in the University of California, Berkeley Wellness Letter. Several studies show that eating a candy bar or consuming other sugar-rich foods does raise the level of glucose in a person's blood. That's exactly what the athlete is hoping for. So, what's the problem? When athletes reason that increased sugar = more blood glucose = greater energy, they're only half right. A higher glucose level does increase energy, but it also triggers a tremendous insulin release. The rush of insulin drops the glucose level lower than it was before the sugar ingestion. The body is forced to summon energy reserves from the muscles — glycogen — earlier than normal. Hence, the body is exhausted more quickly.

The advice of the Wellness Letter: If you're concerned about keeping up your endurance, offer your opponent the candy bar! ©
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There is no need to go outdoors in any weather to run to stay fit because the combination of an exercise bike and the EXERCISE BIKE MATE provides a complete aerobic work out for most muscles.

Arm and leg motions are independent allowing you to adjust the resistance for each separately, plus it can be used by both men and women because it is fully adjustable for people of all shapes and sizes.

The EXERCISE BIKE MATE is made of all metal for dependable long-life and installs on any exercise bike in minutes with no skill or special tools necessary. Retail price is $59.95 each, plus postage. It is available from ARVA INNOVATIONS, INC., Box 143, Arva, Ontario, Canada N0M 1C0.

Isolated Posterior Cruciate from page 248

Reconstruction of nonoperative treatment of early range of motion and extensive rehabilitation are the two options available to the patient. The nonoperative treatment was very successful in this athlete. The encouragement of early range of motion and quadriceps strengthening allowed the athlete to return to activity in three weeks. The athlete returned to competition without braces and supports. Currently the athlete maintains good quadriceps strength and with the proper ratio to the hamstrings.

Summary

Isolated (PCL) tears are reported and identified less frequently in athletics, but can occur when the tibia is driven backwards on the femur. A positive posterior drawer sign and posterior sag will alert you to the injury. Pain and discomfort may be present in the posterior aspect of the knee.

Two courses of treatment exist: reconstruction and nonoperative rehabilitation. Although treatment is controversial, the nonoperative approach has shown success in long-term studies (4). Return to full activity is possible for an athlete with an isolated (PCL) tear who maintains good leg strength.

References


Kin-Com continued from page 236

References


Historical Flashback from page 263

serve a sit down dinner to 300-350 people. Many have questioned the price of the banquet ticket. You must consider that besides the meal, this is an official NATA Awards Banquet and we are honoring many of our fellow trainers. Also, please understand that we must add a 15 percent gratuity and usually 5 percent state tax to the price of the meal. Fifty cents is usually added to cover the overhead expenses for NATA on the banquet.

Other areas of consideration are: Shopping for the ladies, areas where one can eat quick and inexpensive meals, good restaurants, entertainment areas for exhibitors, transportation in and out of the city, easy registration, and convention bureau assistance.

All of these things have made our National Meetings a growing experience. The Clinical programs offer a wealth of educational value. The social gatherings and lobby conversation give us all a sense of pride in NATA, and a sense of knowing we were meant to grow.

Tom Healion
Assistant Executive Secretary
Ankle Sprains Classification Based on Anatomical Structures

Winning Entry of the 1986 Student Writing Contest

Janelle Thomas, ATC

Because ankle injuries constitute twenty to twenty-five percent of all time-loss injuries in running or jumping sports (8), it is no surprise that they can account for a large percentage of the injuries seen in a sports medicine clinic. It is imperative that an athletic trainer be able to assess them accurately and discuss them clearly. Much of the literature written on ankle injuries presents a classification system based on degree of ligamentous damage, i.e. first, second, or third degree sprains (5,7,8,9). Such a classification indicates the ligamentous stability of the joint, but does not clearly identify the specific anatomical structures involved in the injury. In many cases this system alone is inappropriate because exact degree of sprain is difficult to distinguish; for example, in the intertarsal ligaments there is no stress test to determine instability. To clearly discuss ankle injuries one could integrate the standard classification system into a two-part system. After first identifying an ankle sprain as one of four types—lateral, medial, tibiofibular syndesmosis, or intertarsal—one would then perform tests of ligamentous stability to determine the extent of the ligamentous instability. This two-phase approach provides a clear diagnosis from which an appropriate course of management and rehabilitation can be chosen.

Lateral Ankle Sprains

It is estimated that sprains of the lateral ligaments account for some of 85% of the total of all sprains to the ankle (9). Their relative frequency may be attributed both to the bony structure of the ankle joint and to the kinds of forces the ankle is subjected to in running sports (2). The bony architecture of the ankle is that of a shorter medial malleolus, which readily permits the inversion motion. The lateral ligaments consist of three structures: the anterior talofibular ligament, the calcaneofibular ligament, and the posterior talofibular ligament. (Illustration #1) These structures are typically sprained in a running-cutting movement that produces one of two abnormal motions: inversion with plantar flexion, or less often, pure inversion. Inversion with plantar flexion causes a progressive tearing of ligaments from anterior to posterior of the ligamentous structures. Thus, mild inversion-plantar flexion sprain will only damage the anterior talofibular. A more severe inversion-plantar flexion injury will tear the anterior talofibular, which then will cause the calcaneofibular ligament to withstand the stress and allow it to be torn. Finally, a severe inversion-plantar flexion sprain will tear the calcaneofibular ligament, and therefore damage all three lateral ligaments. Pure inversion injuries progress in a similar manner, but damage to the ligaments occurs in a different order. In pure inversion, the first ligament to be held taut and damaged is the calcaneofibular ligament, the second is the anterior talofibular ligament, and the third is the posterior talofibular ligament.

Anterior talofibular ligament: The anterior talofibular ligament passed forward and medially from the anterior margin of the fibular malleolus to the talus, where it attaches in front of its lateral articular facet and laterally on its neck (4). Its function is to limit motion in plantar flexion and forward displacement of the foot (1). The anterior talofibular ligament is the single most commonly injured ligament in the ankle, and the most common mechanism for injuring this ligament is forced inversion and plantar flexion of the foot. It may also be injured after the calcaneofibular ligament in pure inversion motion.

Sprains of the anterior talofibular ligament may be identified by detecting pain and tenderness in the anatomical location of the ligament and by reproducing pain on the inversion and plantar flexion motion (6). The degree of stretch and/or whether the ligament is intact is determined by an anterior drawer test, a test conducted by displacing the calcaneus forward while supporting the tibia (10).

Calcaneofibular ligament: The calcaneofibular ligament extends as a narrow, rounded cord from the apex
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of the fibular malleolus, downward and slightly backward to a tubercle on the lateral surface of the calcaneous (4). Its function is to limit motion in plantarflexion, dorsiflexion, and inversion of the foot. Damage to this ligament occurs most frequently in the second stage of the plantar flexion and inversion motion after the anterior talofibular ligament, but may also be sprained by pure inversion motion, a mechanism that is somewhat rare (10).

Sprains of the calcaneofibular ligament are indicated by tenderness over the ligament and by reproducing pain on passive inversion (6). Integrity of the ligament is determined by the talor tilt test, passive inversion of the foot to detect abnormal motion (7).

**Posterior talofibular ligament:** The posterior talofibular ligament is the strongest and most deeply seated of the ligaments of the lateral aspect of the ankle. It courses almost horizontally from the posterior part of the lateral malleolar fossa of the fibula to a prominent tubercle on the posterior surface of the talus (4). Its function is to restrict backward displacement of the foot (8). Injuries of this ligament are rare, but can occur in the last stages of inversion and plantar flexion motion after the anterior talofibular and calcaneofibular ligaments have ruptured or in pure inversion after damage to the calcaneofibular and anterior talofibular ligaments (10).

Because injury to this ligament is rare, the damage to the posterior talofibular ligament should first be determined by first examining for the appropriate mechanism and related injuries, and then by checking for palpable tenderness over the ligament. Stability of the ligament is determined by stressing the ankle in a posterior direction while supporting the talus (10).

### Medial Ankle Sprains

Sprains of the medial ligament are less common than lateral sprains and usually account for only 2.3% of all ankle sprains (5). This relative infrequency may be attributed both to the anatomy of the ankle joint and to the strength of the medial ligament (10). The lateral malleolus extends more distally than the medial malleolus and resists the motion of eversion. The ligamentous anatomy of the medial side of the ankle is that of one four-part ligament, the deltoid ligament. (Illustration #9) It is a strong, flat, triangular band attached above to the apex and anterior and posterior borders of the medial malleolus of the tibia. It consists of two sets of fiber, superficial and deep. Of the superficial fibers the most anterior (tibionavicular part) passes forward to be inserted into the tuberosity of the navicular bone and immediately behind this they blend with the medial margin of the plantar calcaneofibular ligament. The middle fibers (tibiocalcaneal part) descend almost perpendicularly to be inserted into the whole length of the sustentaculum tali of the calcaneous. The posterior fibers (posterior tibiotalar) pass backward and laterally to be attached to the inner side and posterior tubercle of the talus. The deep fibers (anterior tibiotalar part) are attached above to the tip of the medial malleolus and below to the medial surface of the talus (4).

Although the deltoid ligament may be differentiated anatomically into four component parts, it is difficult to make such a distinction in injury assessment. The deltoid ligament is typically examined as a unit. The mechanism of injury in medial ankle sprains is pronation, a combination of eversion, abduction, and dorsiflexion of the foot. It is not uncommon that this motion may also produce fracture of the lateral malleolus (10).

An interesting mechanism for injuring the anterior portion of the deltoid ligament that is not always documented but does occur is the motion of inversion with severe plantar flexion. Injuries of this mechanism damage not only the lateral ligaments, but can also sprain the anterior portion of the deltoid ligament, which is also taut in severe plantar flexion. This somewhat unlikely mechanism should be kept in mind in clinical assessments.

Deltoid ligament sprains will present tenderness over the medial aspect of the ankle and pain on passive eversion (10). In examining medial ankle injuries, the aforementioned probability of fracture makes it important to rule out fracture of the fibula.

### Sprains of the Tibiofibular Syndesmosis

The anatomy of the tibiofibular syndesmosis is designed to allow little movement between the tibia and fibula at the ankle joint. The abnormal stresses of ankle injury damage structures in this area in approximately 5% of all ankle injuries (5). The structures that can be involved are the anterior tibiotalar ligament, the posterior tibiotalar ligament, and the interosseous membrane (Illustration #1).

**Anterior tibiotalar ligament:** The anterior tibiotalar ligament is a flat band of fibers, broader below than above, which extends obliquely downward and laterally between the adjacent margins of the tibia and fibula on the anterior aspect of the joint (4). Its function is to provide anterior attachment of the distal tibia and fibula.

**Posterior tibiotalar ligament:** The posterior tibiotalar ligament is somewhat smaller than the anterior ligament, but disposed in a similar manner across the posterior aspect of the distal tibio-fibular joint (4). Its function is to provide posterior attachment of the distal tibia and fibula.

**Interosseous membrane:** The interosseous membrane (ligament) passes between the contiguous, rough surfaces of the tibia and fibula and constitutes the chief bond of union between the two bones (4).

The structures of the tibiofibular syndesmosis may be damaged by one of four mechanisms (10): 1) inversion with plantar flexion and rotation, 2) eversion after the deltoid ligament tears, 3) severe dorsiflexion, 4) severe plantar flexion.

Injury to the structures of the tibiofibular syndesmosis may be detected by palpable tenderness in the area and by abnormal side-to-side motion of the talus in the ankle mortice. Significant motion of the talus in the mortice indicates a serious instability of the ankle joint, and should be referred to an orthopedic surgeon for management.

### Intertarsal Ligament Sprains

The articulations of the seven tarsal bones are anchored by numerous small ligaments. (Illustration #8) These ligaments serve to limit lateral motion and circumduction from the talonavicular joint and talocalcaneal joints, and the remaining joints of the midfoot including the calcaneocuboid, naviculo-cuneiform, intercuneiform and tarsometatarsal joints. Any abnormal motion of the foot and ankle is likely to stress these small ligaments and produce sprain in the midfoot region.

In most cases these sprains are detectable only by pain, tenderness, and swelling in their specific regions, and will be fairly stable. Two particular ligaments in this area are commonly involved and merit particular mention.
Bifurcated ligament: The bifurcated ligament is situated slightly superior to the midpoint of a line running between the lateral malleolus and the base of the fifth metatarsal and passes between the calcaneous, navicular, and cuboid. (Illustration #1) It is commonly injured with inversion sprains of the foot, and is detectable by tenderness and swelling directly over its location (10).

Calcaneonavicular ligament: The calcaneonavicular or “spring” ligament serves to maintain the medial longitudinal arch of the foot. Excessive or chronic stresses on this ligament may produce localized discomfort and tenderness which can be relieved with a longitudinal arch support (9).

Conclusion:
Ankle sprains may be classed into four general types: lateral, medial, tibiofibular syndesmosis, and intertarsal. Within each of these classes there are specific ligaments that may be involved. Thorough assessment of an ankle sprain not only involves a determination of the degree of ligamentous laxity, but also a specific discussion of each ligament involved in the injury. Such an assessment will lead to a clear diagnosis, and leaves no ambiguity in choosing a course of management.

References

Brochure Requests
Requests for the brochure entitled “Careers in Athletic Training” should be sent to the National Office at 1001 East 4th Street, Greenville, N.C. 27858. Single brochures are supplied upon request at no charge. NATA officers and committees, schools having an approved athletic training curriculum, and those having an apprenticeship program are furnished multiple copies of the brochure at no charge.
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Habitual Physical Activity In Children: Methodology and Findings In Health and Disease. Saris, W. H. M.

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Historical Flashbacks

The Journal in the Last 30 Years

This being the 30th year of publication of the National Athletic Trainers Association Journal, I would like to look back to that first issue of September 1956 and page through thirty years and bring out some interesting articles and facts.

If one would investigate each issue since that first, you would find that the Journal has made great strides in professionalism.

A vast amount of work and knowledge was put into the NATA Journal. We should be proud of what this Journal is about and proud of the people who have brought it from the September 1956 issue.

Sit back now and let me take you through “memory lane”. I went through each Journal and found a majority of interesting pages. Once you go back and read through the Journals, you too will be overtaken by the height of professionalism the Journal has risen to.

Mike O'Shea

September, 1956
Arthur Dickinson, editor
Arizona State

“Why the Journal?” by the Editor
1. Need for an exchange of ideas
2. Able to disseminate information of professional interest to the athletic trainer from a multitude of sources
3. The professional stature of the organization can be raised through written contributions by every member

“How They Answered — The Status of Trainers?”
Survey of Trainers
1. Salary ranged from $4,300.00 to $8,500.00
2. Years experience from 3 to 44 years of experience

January, 1957

“The Football Trainer is a Forgotten Man But He’s a Solid Factor” by Walter Stewart

A quote from this article was “Hail to the trainer, friend of mankind.”

February, 1958

Advertisement - Plough, Inc./Memphis, TN.

Musterole — Flushing congestion to ease pain/Best for fast relief of muscular soreness, aches, pains, strains.

January, 1959

“Heppinstall Retires after 45 Years As Head Trainer”
“Rehabilitative Knee Exercises” by Ken Rawlinson, University of Oklahoma

April, 1959

“An Investigation on the Use and Satisfaction of Contact Lenses in Sports” by Herbert Player, O.D.

In the article Ernest Biggs, Ohio State University, states, “We have had athletes in various sports using contact lenses since 1942 . . .

Fall, 1960
Jackie Copeland, Editor
New York Titans

Advertisements in the Journal
Bike - The Kendall Company
Cramer Products
Larsons
Featherlaz Mouthguards
E-Z Walk Corp.

February, 1962

“Training in the Good Old Days” by Charles Martin, Head Student Trainer, University of Oklahoma

His article states; “Around 1900, W. W. Morgan was leading conditioner of athletes — some of his rules of training were:
1. Drink sparingly of water
2. If you are weak in the morning, it comes from bathing. Do not bathe for a few days.”

August, 1962

“Functional Isometric Contraction Exercise” Marty Broussard, Louisiana State University

November, 1963

Advertisement — Cramer Products
Cramer Dine-a-pak

A Dietary Chocolate Drink with four oatmeal cookies — Case of 12 cans, $9.85

December, 1964

The Journal for the first time had a picture on the front cover — The picture was a knee injury.

Spring, 1968

On the Cover — pictures of R.E. “Duke” LaRue, Western Illinois University

The cover and inside article was on, “Two-way radio valuable communication device for athletic trainers”.

Winter, 1969

On the cover — Jay Colville, Miami University

“An Athletic Trainer for 45 Years”

“Certification Examination Now in Preparation with the P.E.S.”

Everyone should look on page 18 to see the picture of the exam committee.

Spring, 1970

“Know Your Directors”
The Changing Scene Of Our National Convention

It wasn't too many years ago that a few interested athletic trainers gathered in Kansas City for the first annual meeting of The National Athletic Trainers Association. Many of these men are still attending our meetings; others have since passed on or retired. Then there was the favorite meeting of all, the fun in Jay Colville's backyard, and the dormitories of Miami University in Oxford, Ohio. Not many attended these meetings, possibly 100 or so. But it was always crowded, because everyone seemed to be close.

If you come to a National meeting now, you can still hear many of our fine trainers and their families talk of those wonderful meetings. The big difference is that they are not in a backyard anymore; they are usually in the lobby of one of the major hotels in a very large city. This, then, is the evolution of our National Convention in the 70's. The big change occurred at the Conrad Hilton Hotel in Chicago in 1965, and we have been growing ever since.

The Hotel industry has classified NATA as a major convention. We are solicited by hotels for their business and, due to our size and needs, must commit ourselves to a hotel three years in advance of our meetings. For example, we have just signed with a hotel in Atlanta for our 1973 Convention. In order to give our members and their families the best service and convenience, we must select and choose from the large downtown hotels in major cities. The following are a few of the considerations in setting up our annual meeting:

Exhibit Space: The average number of exhibits for a hotel convention is 35-40. Due to Warren Ariail's hard work, we are now at 65-70, and must have adequate space.

Traffic Patterns: Easy access to lecture area, exhibits area and registration desk are very important. We must move people quickly and quietly.

Room Rates and Parking: Anyone who travels with athletic teams knows that room rates are constantly going up. Our latest rates are on an average of $14.00 for a single and $22.00 for a double. There is no way we can get by for less. In some hotels parking is free to hotel guests. If there is a charge, it is usually minimal, and less than a cab fare from the airport to the hotel.

Meeting Rooms: During the course of our Convention, we have many meetings going on besides the clinical sessions. For this, we need at least five separate rooms seating 15-20 people, plus an association office to channel NATA business.

The NATA Banquet: This requires a room that will continue on page 253
Comprehensive Guide to Cryotherapy Techniques

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"This text should be required reading for all professionals involved in the management of athletic injuries."

William C. McMaster, M.D.
Orange, California

Journal Review - January 1986

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Contact A-V District Representative

Placement

The telephone number for the twenty-four hour PLACEMENT VACANCY NOTICES regarding job opportunities is (919) 752-1266. Two different notices are available: Graduate Assistantship notices may be heard on Monday, Wednesday and Friday from 9:00 in the morning until 5:00 in the evening Eastern time. General Employment notices can be heard at all other times. You might want to have a pen and paper available to record any positions if you are interested. You also might want to make a recording of this notice with your personal tape recorder. This information will be updated on the first and fifteenth of every month.

A current Placement File is maintained by Craig Sink, Chairman of the Placement Committee. If you would like to have your resume included in this file send to Craig Sink, NCSU, Box 5187, Raleigh, NC 27650.

Membership

The Membership Committee would like to inform our members of the growth during the last eleven months in our Association. During the period beginning August 1, 1985, to June 30, 1986, we had 1,649 individuals join NATA. 1500 new members (90%) were Students; 99 (6%) Associates; and 50 (4%) in all other membership categories.

To all Certified and Associate members who are attending graduate school full time: Send your verification, signed by your registrar, with your reduced membership fees ($25.00 plus district dues according to your district).
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Schedule of Sites and Dates

All regional sites are subject to a minimum of six candidates per site and limited to a maximum of thirty-six candidates. Completed applications must be received by the Certification Office within the prescribed deadline for the examination date chosen.

**January 18, 1987** — Deadline for the receipt of applications is December 2, 1986.

- New Britain, CT
- Pittsburgh, PA
- Montclair, NJ
- Richmond, KY
- Anderson, IN
- Minneapolis, MN
- Greensboro, NC
- Fort Worth, TX
- Albuquerque, NM
- Santa Clara, CA
- Eugene, OR


- New Britain, CT
- Montclair, NJ
- Anderson, IN
- Chicago, IL
- Omaha, NE
- Greensboro, NC
- Houston, TX
- Santa Clara, CA
- Richmond, KY
- Seattle, WA

**July 12, 1987** — Deadline for receipt of applications is June 1, 1987.

- Boston, MA
- Claymont, DE
- Pittsburgh, PA
- Columbia, SC
- Costa Mesa, CA
- Dayton, OH
- Madison, WI
- Maryville, MO
- Denver, CO


- Boston, MA
- Mechanicsburg, PA
- Morgantown, WV
- Granville, OH
- Holland, MI
- Fort Worth, TX
- Lincoln, NE
- Costa Mesa, CA
- Logan, UT
- Cheney, WA
- Richmond, KY

(NOTE: The Clinical Hours Report Form may be xeroxed from page 160 of the Summer ’86 issue of *The Journal.*

Minority Athletic Trainers

The Minority Athletic Trainers Committee was established to bring about an awareness and understanding of athletic training and sports medicine in the minority areas, as well as to serve as a guide to those who currently seek professional status as a certified athletic trainer. This effort will incorporate the help of all the other NATA committees and ultimately bring the quality of health care to a higher standard to those areas that need it most.

While the committee’s programs are aimed at the minority athletic trainer and their problems, it will also serve those individuals that work in situations where they, themselves, are the minority. The Minority Athletic Trainers Committee will benefit all members of the NATA and welcomes input from the entire membership.

**Minority Athletic Trainers Committee**

Phillip G. Horton, Chairman
P.O. Box 982
Florida A&M University
Tallahassee, FL 32307

Tom Bynum
Athletic Dept.
N.C. A&T State University
Greensboro, NC 27411

Bernard James
Athletic Dept.
Howard University
6th & Girard St. N.W.
Washington, DC

Ronnie Barnes
New York Giants Football Club
Giants Stadium
East Rutherford, NJ 07073

Ben Carbajal
Athletic Dept.
Pima Community College
Tucson, AZ 85709

Carl Williams
Athletic Dept.
Southern University
Baton Rouge, LA 70813

Aronald Bell
P.O. Box 982
Florida A&M University
Tallahassee, FL 30307

Bill Hill
410 Woody Hayes Dr.
Columbus, OH 43210

Buddy Taylor
Athletic Dept.
Winston Salem State University
Winston Salem, NC 27102

Professional Education

**Sayers “Bud” Miller**
**Distinguished Athletic Training Educator Award**

Nominations are being received for the annual **Distinguished Athletic Training Educator Award** to be presented by the NATA Professional Education Committee in recognition of excellence in athletic training education:

**I. Qualifications**

To be nominated for the award, educators must have the following qualifications:

1. Current member of the National Athletic Trainers Association, Inc.
2. Member of a teaching faculty in the area of athletic training/sports medicine for at least ten (10) years.
TWO MORE REASONS WHY WE’RE #1

The Wet Vest™ is designed to allow exercise in deep water. Greater resistance, provided by water, accelerates training benefits. The Wet Vest™ decreases not only training time but neuromuscular trauma. Unlike life preservers, the Wet Vest™ holds the wearer in an upright position (rather than in a backward tilt), which allows the patient to "run" in deep water.

- Rehabilitates athletic injuries.
- Augments training for athletes (runners, cyclists, swimmers, etc.)
- Provides cardiovascular training for overweight patients, pregnant patients and elderly patients.
- Replaces more traumatic forms of exercise for arthritic patients and back patients.

ANKLE STRAP

Finally! Help for sprained and weakened ankles. After five years of research and development, this support has been described by orthopedic surgeons, therapists, trainers, coaches and athletes as "unquestionably the finest ankle support available." Already in use by top amateur and professional athletes, the Kallassy Ankle Support™ provides outstanding protection, support and convenience that has not previously been available. For initial therapy and long term management, now there's a comfortable support available at an affordable price.

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1-800-527-5273, or in Texas (214) 358-4528
P.O. Box 29508 Dallas, Texas 75229
3. Minimum of ten years of outstanding service in the area of athletic training education and research.
4. Recognized excellence in the field of athletic training education.
5. Outstanding service in district, state or national professional organizations concerned primarily with the field of athletic training.
6. Evidence of quality in publications and public speaking on topics in athletic training/sports medicine.

II. Nomination Procedures
1. the candidate's current personal resume which includes:
   a. academic background
   b. employment background
   c. published research and other publications (journal articles, books, etc.)
   d. course work taught (during past five years)
   e. classroom teaching innovations
   f. course work/curriculums developed
   g. professional memberships
   h. positions on state, district, or national level of the National Athletic Trainers Association, Inc.
   i. positions on state, district, or national level of related sports medicine professional organizations
   j. consultant work
   k. speaking engagements on community, state, regional, and national levels

   l. community service
   m. college or university service (i.e. committee involvement, thesis advertising, etc.)
   n. any other pertinent materials

2. A minimum of three letters (additional letters may be submitted) from professional colleagues, administrators, or students providing detailed rationale in support of the candidate's nomination.

Nominations including the above materials should be sent to the Professional Education Committee Project Director, Honors and Awards, and must be received by March 1, 1987. Presentation of the award will be made to the recipient at the 1986 NATA Annual Meeting and Clinical Symposium in Las Vegas, Nevada. Send nominations to:

Ken Murray
Athletic Department
Texas Tech University
P.O. Box 4199
Lubbock, Texas 79409

MOVING?

Please notify the National Office of your new address as well as your old address (at least 30 days in advance of publication).

Public Relations

NATA-Member Network Firing Up Public Education Drive

By John LeGear

The Board of Directors determined in June that the NATA is "on target" with its public education drive to make parents and educators more aware of the need for certified athletic trainers to protect and care for interscholastic athletes. As we proceed into the fall, efforts are being intensified to deliver the NATA message specifically to the local school boards who share the responsibility for ensuring the safety and well being of America's 5.6 million high school student athletes. We are achieving our objective in a variety of ways.

During the summer, 140 NATA members from all over the country joined the NATA public relations campaign as designated representatives for their state or region. Through this network of athletic training professionals, a two-way street for communication has been opened between the membership and the NATA's leading communicators, headed by Executive Director Otho Davis, President Jerry Rhea and Public Relations Committee Chairperson Bobby Barton.

As one example of how effective the NATA public relations network can be, we asked our designated representatives in July to contact the television stations in their state. The purpose was to collect information that would enhance viewership of the NATA's third public service announcement. In only 10 days, the "NATA PR network" returned specific information for 345 television stations, nearly half of all commercial stations in the U.S. This overwhelming response was described by the founder of our PSA distribution company, who has been in the broadcast business since 1942, as "the best cooperative effort seen since the reply card system was developed 15 years ago — at least 50 percent better than anything I have ever seen."

When adding this list of television stations to our existing one, we arrived at a total of more than 450 that received the NATA PSA in August. The stations have no obligation to use our PSA, of course, but based on our success rate to date, more than 100 million viewers will see former UCLA and Philadelphia Eagles head coach Dick Vermeil volunteered his services to host the third NATA public service announcement for television at the request of Executive Director Otho Davis. It was produced at West Chester University in Pennsylvania with assistance from head athletic trainer Joe Godek.
The Sports World is Talking About This Book!

“... an invaluable tool!”
—Lute Olson, Head Coach, U.S. Basketball Team, 1986 World Games; PAC-10 Basketball Coach of the Year 1986

“... an excellent resource.”
—George Young, Four-time U.S. Olympic Distance Runner

“... a welcome and informative reference.” —Standley Scott, Head Athletic Trainer, Stanford University

Complete Guide to Sports Injuries is being recognized as the most outstanding tool available today in treating and preventing the most-common sports injuries and illnesses. As athletic training professionals, you are all too keenly aware that improper conditioning and intense competitiveness leave many vulnerable to injury and medical problems. Complete Guide to Sports Injuries specifically addresses the benefits, risks and physical requirements for athletic competition. It provides:
- illustrated sports-injury and sports-medicine charts for quick reference,
- complete, illustrated rehabilitation programs for injuries in each of 13 major body areas,
- appendix covering 20 specific sports topics
- emergency first aid,
- glossary of medical terms.

It’s the first of its kind—written for professional and amateur athletes, coaches, medical professionals and trainers, fitness enthusiasts and parents with children who participate in sports.

Complete Guide to Sports Injuries is written by Dr. Winter Griffith, M.D., a 20-year medical professional and former team physician for Florida State University, treating athletes in football, basketball, baseball, soccer, swimming, tennis and golf. He has written two best-selling books, Complete Guide to Prescription & Non-Prescription Drugs and Complete Guide to Symptoms, Illness & Surgery. Dr. Griffith received his M.D. from Emory University and has spent more than 25 years in private practice, university teaching and hospital administration.

Make this book part of your personal and professional library—it’s a book you’ll refer to often. To order your copy, send check or money order, payable to HPBooks, Inc., for $14.90 (includes postage & handling) to: The Body Press c/o HPBooks, Inc., P.O. Box 5367—Dept. ATH-96, Tucson, AZ 85703. Or, call Toll-free 1-800-529-4923. (In AK, AZ & HI call collect 602-888-2150.)
Dick Vermeil deliver the NATA message on 200 stations or more through the end of the year.

Public service announcements for radio were distributed in late August to adult-oriented radio stations in every state, totaling nearly 2,000. The NATA radio PSAs carry the same theme used for television.

The Print Media

In August, the PR network received NATA press releases on “heat-related illnesses” and “the imperative need for high school athletic trainers” that was sent to 760 daily newspapers with circulation over 20,000. By receiving the story on the same day it is received by sports editors, NATA PR representatives are prepared to respond to media inquiries. In the future, NATA members may initiate contact with the media to determine whether or not our press release has arrived. In either case, we increase media awareness of “who we are and what we do,” which in turn helps reach parents and educators who consume information provided by the media.

In late August (after this publication’s deadline), several members of the New York media reviewed the NATA public education program with Dick Vermeil and either of our two national spokespeople, Dr. Robert Hamilton from Chicago’s DePaul University and sports litigation expert Rick Ball from Phoenix. The purpose of these meetings was to show the media that the NATA’s concerns for high school athletes is shared by representatives from many professions.

It probably goes without saying that we do not have the type of story that brings presses to a screeching halt. Ours is a “prevention” story, an issue that rarely claims big headlines without a catalyst. Unfortunately, the catalyst is usually a sports injury to a high profile athlete, or a rash of serious sports injuries in a given locale. However, by making contact with major media outlets in New York — ranging from the New York Times and Newsweek to Phil Donahue and ABC News Nightline — we’re letting them know where to find the NATA if they need us.

News/Documentary Film

In September, we begin production of the first NATA film. As stated at the national business meeting in Las Vegas, we will use a news/documentary format for the 12-minute film, similar to that of “Sixty Minutes” on CBS-TV. Budget considerations limit us to a 120-mile radius around Chicago in making the film, but every effort will be made to feature the athletic training profession as we know it at the high school, college and professional level.

The film is produced by the NATA with financial assistance from the two corporate sponsors of the public education program: the Athletic Division of Johnson & Johnson Products, Inc. and The Quaker Oats Company, maker of Gatorade Thirst Quencher. We will complete the film by early January. As with the NATA sound/slide presentation made in 1985, we will rely heavily on NATA members to purchase the new film (at cost) and present it for the benefit of parent-teacher organizations, booster clubs, school boards, coaches organizations and similar groups. The film will also be delivered to television and cable stations, among them ESPN, Cable News Network and Superstations like WGN and WTBS.

Key Market Program

During the next several months, the public relations program will be intensified in three key markets: Syracuse, New York; Indianapolis, Indiana; and Phoenix, Arizona. The purpose of this “key market” effort is to determine what level of success our public relations program can have if we had the luxury of focusing on selected cities instead of the entire country.

Counting Our Blessings

During one of almost daily phone conversations with past president Bobby Barton, we recently found ourselves counting blessings. I noted that up to 100 press clippings come in each month that relate in some way to our “prevention program,” albeit many from very small papers. Bobby stated that for a group of professionals who often feel unrecognized, “trainers” or, more correctly, “athletic trainers”, probably get mentioned at least 100 times every day in the media. Athletic trainers aren’t invisible, we agreed, just misunderstood.

So we also agreed the NATA is fortunate to have so many fine publications that maintain and build awareness of the profession. The editors and contributing writers for the NATA Journal rarely get the thanks they richly deserve for an excellent publication. Cramer Products’ The First Aider has been an invaluable information tool for athletic trainers young and old for years.

More recently, the Athletic Division of Johnson & Johnson Products has been publishing a first-class bimonthly newsletter for athletic trainers and other members of the paramedical profession since late last year.

And with an approach that reveals a more personal side, the bi-annual newsletter of the Professional Football Athletic Trainers’ Society (PFATS) has been around for four years now, courtesy of Gatorade Thirst Quencher, which has a licensing agreement with the NFL. To add a new wrinkle, the first PFATS media guide, which profiles all 63 NFL athletic trainers, was distributed in August to 2,000 reporters and broadcasters.

Separately, newsletters and press releases and public service announcements serve notice that athletic trainers are an essential part of any good sports program. But in sum, they reflect an accurate profile of the NATA that is, purely and simply, an organization of 9,500 people who sincerely care for and about other people.
Physical fitness is its own reward. We look better, feel better and perform better when we are physically fit.

The Healthline Fitness system is an aggressive approach to improved physical fitness by conditioning the musculo-skeletal and cardio-respiratory system. Healthline combines three groups of major exercise activities in their Fitness system: muscle flexion & stretch, muscle strength & tone, and cardiovascular conditioning. These activities are accomplished at exercise stations located along an outdoor trail. Up to 22 different Healthline exercise stations may be employed in the fitness trail. Each station includes the appropriate exercise equipment and illustrated sign that explains the activity. The Healthline Heart Check Station explains use of the system with regard to vigor of exercise, age and heart rate.

The Healthline Fitness System requires no supervision and little maintenance. Athletic trainers incorporating the system into their programs may develop different regimens to fit specific needs.

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An injury surveillance study by the NATA this school year is expected to produce a more accurate profile of the injury toll in U.S. high schools. Currently, the NATA estimates that 90 percent of the nation’s 5.6 million prep athletes get only minimum athletic health care protection beyond that provided by volunteer physicians.

That lack of care is responsible for time-loss injuries to 800,000 athletes every year, Davis said. Of those, about 100,000 are serious.

“Certified athletic trainers have proven essential in college and professional sports,” said Davis, who is also head athletic trainer for the NFL’s Philadelphia Eagles.

“The NATA foresees a time when parents of student athletes recognize that certified athletic trainers are as vital to schools as English teachers.”

Davis’ claims are supported by results of a survey conducted recently by The Coaches Legal Report, an Atlanta-based publication. It revealed that 97 percent of high school coaches and athletic directors see the need for a certified athletic trainer in their sports program.

Nearly four out of five coaches and administrators who participated in the survey said their schools didn’t have a certified athletic trainer, however, usually due to “budget restrictions.”

“There is a price to pay either way,” Davis said. “It takes less money to treat and rehabilitate athletes if some injuries are prevented in the first place. All we’re doing is encouraging parents to voice their support for prevention.”

Soaring liability insurance rates and a growing number of personal injury lawsuits have prompted coaches and administrators to study risk management more carefully, said Rick Ball, a sports litigation attorney from Phoenix, Arizona.

“The people associated with interscholastic athletics are well aware that certified athletic trainers can reduce the impact of sports injuries and liability,” Ball said. “I am not sure parents are as well informed, however, and they’re the ones who can generate funding.”

Media contact: John LeGear

312/386-1610

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Research & Injury

OUTSTANDING RESEARCH AWARD

CALL FOR PAPERS

The Research and Injury Committee of the National Athletic Trainers Association has as its overall mission to encourage members of the NATA to conduct, document, and report research in the athletic training profession. In order for our profession to grow we must continually search for new methods of prevention, care and rehabilitation of athletic related trauma. We also have a responsibility to monitor the effectiveness and strive for excellence in our current clinical procedures. To this end, the Research and Injury Committee established the Outstanding Research Award.

The Outstanding Research Award is designed to provide recognition for the research efforts of the members of our profession. The Research and Injury Committee and a panel of noted researchers in the area of Sports Medicine will review all papers submitted for consideration. The entire review process will be conducted so that no reviewer is able to identify the authors or the institutions associated with any paper being considered. The Research and Injury Committee will determine the appropriateness of the papers and the amount of the cash awards to be presented to the Outstanding Research Project as well as the award for the first runner-up. In general, the runner-up award will be half of that established for the Outstanding Research Award.

The Research and Injury Committee reserves the right not to provide an award, either first or second, or both, if in its opinion the submitted manuscripts have not met the established criteria. Athletic Training, The Journal of the National Athletic Trainers Association has the first right of publication of papers submitted for the Outstanding Research Award. Papers that have been submitted for publication in other professional journals are ineligible for this program. Should the Journal elect not to publish the recipient’s paper, consideration will be provided at 75% of the original award amounts.

It should be noted that this program is not to be confused with the Call for Abstracts for the 1987 Free Communications Session in Columbus. The Outstanding Research Award is offered based on fully completed projects and requires written documentation of background, method, data collection, findings, discussion, bibliography and auxiliary funding sources.

To be eligible for the Outstanding Research Award the following criteria are established. These criteria must be followed and submission deadlines met in order for papers to be considered.

1. The Principal Investigator must be an NATA Certified Athletic Trainer.
2. The project must be of original design and not have been published at the time of application.
3. The project must require a completed research effort at the time of application.
4. Entries must be written in journal manuscript format according to the Guide to Contributors established by the NATA Journal.
5. ATHLETIC TRAINING, The Journal of the NATA has first choice to publish any paper receiving a cash award. Winners will be notified by July 1st whether or not Athletic Training intends to publish their papers.

Entrants should take great care to see that their papers are suitable for publication.

6. Completed papers must be received by the following address prior to January 30, 1987:

Mr. Russ Cagle
Head Athletic Trainer
Williamette University
Salem, OR 97301

The basic criteria for final selection will be as follows:

1. ORIGINALITY
   A. Background for nature of the project.
   B. Creativity and utility of the research design.
   C. Need based on existing review of literature.

2. DEPTH OF ANALYSIS
   A. Use of appropriate statistical designs and methodologies.
3. APPLICATION FOR THE PROFESSION
   A. Effectiveness and relationship of research to the clinical setting.
   B. Application for growth of the athletic training profession.

4. PRESENTATION
   A. Clarity of organization.
   B. Internal Consistency.
   C. Bibliography.

FREE COMMUNICATIONS CALL FOR ABSTRACTS
June 1987

Each year during our National Convention, members are continually sharing ideas, procedures, techniques, innovations in and for the profession of athletic training. Most of these conversations are among small groups of members and much of the information exchanged would be highly meaningful for the larger group. Many of these ideas have been developed through systematic data collection and observations made by the athletic trainers in the performance of their responsibilities. The accumulation of this information represents an important form of applied research.

With this in mind, the NATA Research and Injury Committee will offer a Free Communications Section at our National Meeting in Columbus, June 1987. In order to provide organization to this session, the Committee is issuing a CALL FOR ABSTRACTS from the NATA membership. The titles of the projects to be presented will be available to members prior to the convention so that they will know which topics will be discussed and at what time during the session.

The response to this session has been excellent. We encourage each member to participate in these information exchanges. So please submit your abstract soon and we look forward to seeing you in Columbus.

INSTRUCTIONS FOR COMPLETION OF FREE COMMUNICATION ABSTRACT

Please read all instructions before preparing abstract. Carefully develop your abstract so that it is within the boundaries of the space provided on the following page. Mail a clearly typed original and one copy prior to January 30, 1987.

1. Type title of paper or project in all caps.
2. Type the name of all authors with the author that will make the presentation listed first.
3. Indent three spaces on a new line and type the text of your paper.
4. Indicate any funding or grants information on one line at the bottom.
5. Indicate if presenting author is “member of the NATA.”
6. Indicate any audio-visual aids required.
7. Sign the completed abstract.

REMEMBER: Your abstract should be of the informative type and should contain:
   A. Sentence stating the specific objective of the project.
   B. Brief statement of methods.
   C. Summary of results.
   D. Statement of conclusion.

All submitted abstracts are sent to a sub-committee consisting of members of the NATA Research and Injury Committee. Each member of this group will independently review and rank each abstract submitted without benefit of the author’s name or affiliation. Final selection of the abstracts for presentation are determined by the review committee’s order of merit. The number of selection’s are dependent upon the amount of time allotted for the Free Communication Sessions at the National Convention. Each presenter will have fifteen minutes in which to deliver his/her topic. Notification will be made in plenty of time for final paper preparation.

---

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COLUMBUS, OHIO
JUNE, 1987

Presenting Author(s): ____________________________________________
Address: _______________________________________________________  
Representing: ____________________________________________________
Telephone: __________________________ Audio Visual Needs: ____________
Is presenting author a member of NATA? ___________________________
Completed abstracts must be received at the following address prior to January 30, 1987:

Russ Cagle
Head Athletic Trainer
Williamette University
Salem, OR 97301
Honor Awards

APPLICATION FOR NATA HONORARY MEMBERSHIP

TO BE COMPLETED BY THE RECOMMENDING CERTIFIED ATHLETIC TRAINER

NAME OF RECOMMENDING ATHLETIC TRAINER

POSITION ________________________

PLACE OF EMPLOYMENT.

ADDRESS __________

PHONE: OFFICE ( |)

REASON FOR SUBMITTING PROSPECTIVE MEMBER:

SIGNATURE OF SPONSOR ________________________

CERTIFICATION NUMBER _

MEMBERSHIP NUMBER _

NATIONAL ATHLETIC TRAINERS' ASSOCIATION, INC.

HONORARY MEMBERSHIP COMMITTEE

POST OFFICE DRAWER 1865

GREENVILLE, NORTH CAROLINA 27835-1865

APPLICATION FOR THE NATA HALL OF FAME

The highest honor a member of the National Athletic Trainers’ Association, Inc., can receive is induction into the NATA Hall of Fame. The NATA invites eligible and deserving candidates to make application for this most prestigious honor and be recognized for their contributions to the profession of Athletic Training.

Any worthy individual, regardless of race, creed, color, sex or physical disability, based on their contribution to not only the NATA, but to the profession of Athletic Training shall be nominated by their District Director or the NATA Board of Directors. Only Twenty-Five Year Membership Award members shall be nominated, unless there is a special directive from the NATA Board of Directors. Candidates are first reviewed by their District Directors and then voted on by the NATA Board of Directors. The candidates who receive a majority vote are then submitted for final approval prior to being voted on by the NATA Board of Directors.

TO BE COMPLETED BY THE SPONSOR

NAME OF SPONSOR ______________

POSITION ______________

PLACE OF EMPLOYMENT.

ADDRESS __________

PHONE: OFFICE ( |)

SIGNATURE OF SPONSOR ________________________

CERTIFICATION NUMBER _

MEMBERSHIP NUMBER _

APPLICATION FOR TWENTY-FIVE YEAR MEMBERSHIP AWARD

Twenty-five years of active athletic training requires considerable fortitude and stamina. The National Athletic Trainers’ Association, Inc., is anxious to recognize such service and has appointed a committee to attend to the business of this recognition.

Such a candidate must be sponsored by a fellow NATA Certified Athletic Trainer and certified by the District Officers of the District in which the candidate wishes to be a member. Any member who has twenty-five years of service as an Athletic Trainer after receiving the Bachelor’s Degree and whose primary responsibility has been Athletic Training is eligible to receive the NATA recognition. Years spent in undergraduate school cannot be credited. Graduate school years will be credited if the individual is certified by the NATA before entering graduate school and the individual is employed as an Athletic Trainer during the year. Years spent in military service can be credited if the individual was in the National Guard while serving in active military service.

TO BE COMPLETED BY THE SPONSOR

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POSITION ______________

PLACE OF EMPLOYMENT.

ADDRESS __________

PHONE: OFFICE ( |)

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CERTIFICATION NUMBER _

MEMBERSHIP NUMBER _

DISTRICT DIRECTOR _________

DISTRICT SECRETARY _________

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NATIONAL ATHLETIC TRAINERS’ ASSOCIATION, INC.

HALL OF FAME COMMITTEE

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PROCEEDINGS of the BOARD OF DIRECTORS NATIONAL ATHLETIC TRAINERS’ ASSOCIATION, INC.

June 6-11, 1986
Bally’s Grand Hotel
Las Vegas, Nevada

SUMMARY OF ACTIONS
NATA BOARD OF DIRECTORS

The following agenda items were considered and actions taken by the NATA Board of Directors at its meeting held at Bally’s Hotel, Las Vegas, Nevada, commencing at eight-thirty a.m., on Friday, June 6, 1986 and terminating at ten-forty a.m., on Tuesday, June 10, 1986, with Mr. Bobby Barton, President, presiding and with the following present:

Mr. Bobby Barton, President
Mr. Otho Davis, Executive Director
Mr. Jack Baynes, District 1
Mr. Hal Biggs, District 2
Mr. Andy Clasen, District 3
Mr. Gordon Graham, District 4
Mr. Denis Icroy, District 5
Mr. Paul Zeeck, District 6
Mr. Dan Libera, District 7
Ms. Janice Daniela, District 8
Mr. Jerry Rhea, District 9
Mr. Mark Smaha, District 10
Mr. Bruce Melin, Parliamentarian

I. REAPPROVAL OF MAIL VOTE ITEMS:

Moved by District 5, seconded by District 7 and carried 10-0 that the action on the previously approved mail vote items as below indicated be again re-approved.

A. Approval of Dr. Robert Kerlan, Los Angeles, California, as recipient of the 1986 President’s Challenge Award.

B. Approval of 1986 NATA Hall of Fame recipients:

Edward R. Abramaski, Buffalo Bills Football Club
George C. Anderson, Los Angeles Raiders Football Club
Chester A. Grant, North Carolina State University
Carl E. Nelson, Colby College
William C. Samko, Worcester College
Henry L. Andel, Georgia Tech
William H. Chambers, Fullerton Junior College
Eugene J. Harvey, Grumbling State University
C. Roy Rylander, University of Delaware
Fred A. Wappel, University of Missouri

C. Approval of 1986 NATA Honorary Membership recipients:

Thomas A. Bradley, MD
Robert E. Cassidy, MD
William G. Clancy, Jr., MD
Kenneth G. Knowles, MD
Allan M. Levy, MD
Glenn L. McInroy, MD
Gerald M. Thomas, MD
James L. Van Deusen, MD
William E. Youmans, MD

D. Approval of 1986 Twenty-Five Year Award recipients:

Richard M. Barkholder, District 2
Thomas W. Couch, District 3
Phillip B. Donley, District 2
Donald E. Frey, District 2
Douglas F. Frey, District 2
Joe H. Gieck, District 3
Fred G. Kelley, District 1
Edward C. Kwest, District 4
Paul D. Kichline, District 2
Robert H. Lundy, District 9
James W. Marshall, District 4
Leo W. Marty, District 10
George E. Meneeley, District 4
J. Lindsey McLean, District 8
John L. Perego, District 2
Joseph L. Proski, District 7
Jack Res Jr., District 2
Thomas E. Simmons, District 9
John C. Wells, District 3
William Wiedergott, District 1
Al Wilson, District 6
Troy L. Young, District 7
Paul T. Zeeck, District 6

E. Approval of 1986 NATA Scholarship recipients:

Joe A. Garsumone, Arizona State University
Scott A. Goble, Anderson College
Charles B. Harrington, Jr., University of Texas, El Paso
Kathryn E. Osborne, University of Tennessee at Martin
Kent Depner, Western Montana College
Mathew L. Kemp, Weber State College
Kevin M. O’Connor, Ohio State University
Randall W. Reaves, Texas Christian University
Paul E. Widner, Indiana State University
Harold J. Einsig, West Chester University
Tomio Hadza, East Carolina University
Marian C. Thomas, University of New Mexico
John A. Jones, University of Pittsburgh
Don L. Manger, Brigham Young University
Terri L. Handy, Springfield College
James J. O’Toole, Northeastern University
Lisa C. Monacelli, Illinois College
Jennifer A. Moshak, Western Michigan University
Mark L. Amundson, South Dakota State University
Elizabeth Schutze, West Virginia University
John R. Wawryznik, Canisius College
Patricia M. Hochstetter, California State University at Los Angeles
Janelle A. Thomas, Marietta College
Lisa J. Kaim, Lock Haven University
Patricia L. Callam, Hope College
J. Drayton Troisi, Purdue University
Terry Stocker, San Diego, California

F. Appointment of Gordon Coole, Boston University (District 1), to Certification Committee.

G. Appointment of Paula Summerson, Eastern Kentucky University (District 9), to Certification Committee.

H. Approval of $100 to Drug Education Committee.

II. APPROVAL OF INFORMATIONAL ITEMS:
The following reports, containing no recommendations or requests for action, were in accordance with motion duly made, seconded and carried 10-0, accepted as information:

Publications
American College of Family Physicians
American College Health Association
American College of Sports Medicine
American Corrective Therapy Association
American Running and Fitness Association
National Association of College Directors of Athletics
National Association of Intercollegiate Athletics
National Federation of State High School Associations
National Football League Alumni
President’s Council of Physical Fitness and Sports
Athletic Trainer of the Year WBA Athletic Foundation

The American Corrective Therapy Association report is as follows:

April 9, 1986
Liaison Report: American Corrective Therapy Association

Jim Nice, ATC, has agreed to represent the NATA at the American Corrective Therapy Association’s 38th Annual Conference on July 15-18 in Toledo, Ohio. All the available information on the conference has been sent to Jim.

The American Corrective Therapy Association continues to struggle for recognition and they are still developing sample legislation to try to get licensing in several states. They have a relatively small organization and are looking to find additional outlets for employment for their members. Our ties to their organization lies mainly in their education background (Health & Physical Education) and their work in rehabilitation.

I would like to recommend to the Board that we continue our relationship with the American Corrective Therapy Association, and, through our liaisons, help them by relating our experience in gaining recognition and licensing.

Respectfully submitted,
Jeff Fair
Head Athletic Trainer
Oklahoma State University

The American Running and Fitness Association report is as follows:

278 Athletic Training • Fall 1986
March 27, 1986
Bobby Barton, Ph.D.
President
National Athletic Trainers Association
100 East Fourth Street
Greenville, SC 29601

Dear Dr. Barton:
As the new Executive Director of the American Running & Fitness Association, I am writing to thank you for your past involvement with ARAF & to initiate what I hope will be an ongoing relationship that will benefit health and fitness of Americans nationwide.

We both know the remarkable things people can accomplish once they pursue physical fitness as a way of life. Thanks to people like you, millions of Americans have achieved further healthier lives. But for each individual who is exercising regularly and eating nutritionally, there is another who is not.

The most effective way to reach the latter is for each of us to do what we have been doing and, where possible, to work together to communicate our message. Therefore, I am eager to draw on the experience and expertise of fitness-minded people like you in order to reach our shared objective.

I am enclosing a copy of ARAF's most current newsletter and will keep you updated on our projects. Please consider this to be a means of assistance; or if you have any suggestions on how we may work together in the future, thank you again for your support.

Sincerely,
John C. Lynch
Executive Director
American Running & Fitness Association

The NAIA-ATA and the Medical Aspects of Sports Committee met on Saturday, March 15, 1986 - The Vista International Hotel, Kansas City, MO.

The NAIA-ATA and the Medical Aspects of Sports Committee met on Saturday, March 15, 1986 with the following members present:

- Gary Smith
- Scott Bruce
- Al Ortolani
- Don Spencer, M.D.
- Nancy Diehl
- Herb Appenzeller
- Mark Huntington
- Wally Schwartz
- Jim Riley

The meeting was called to order by Gary Smith.

I. Re-evaluation of the cheerleading policy set by the NAIA that allows pyramids, stacking of bodies and propulsion of the body by external forces

Wally Schwartz stated that he had received a great deal of mail and telephone calls since this rule went into effect. He estimated that the overwhelming response from colleges and administrators was favorable, while cheering/moderators seemed to be about evenly divided. He indicated that the committee should decide if any changes were necessary or if the rule should be maintained as written.

Don Spencer moved that the cheerleading rule should remain as is. Herb Appenzeller seconded the motion. Passed unanimously.

II. Drug Testing

Wally Schwartz reported that drug testing is still an issue in the NAIA, although the last tests were conducted three years ago. Don Spencer proposed that the NAIA should test for recreational drugs using both blood and urine tests. Testing for anabolic steroids is not feasible because of the cost and questions about validity. He said that the United States Olympic Committee might agree to fund urine tests and the National Football League might pay for blood tests.

Wally Schwartz pointed out that the NAIA could test a precedent by doing both urine and blood tests. He stressed that the results of the tests would be used for educational purposes only and positive results would not result in punishment of any kind.

PROPOSAL: The NAIA Athletic Trainers Association and the Medical Aspects of Sports Committee recommended that the NAIA undertake random blood and urine testing for recreational drugs at championship events. Compliance with the tests will be voluntary. The tests will be funded by outside sources such as the United States Olympic Committee.

III. Acceptable Standards of Care

Wally Schwartz asked if it was necessary to formulate some guidelines for the care of our athletes.

Concerns were mentioned about the skyrocketing cost and high insurance coverage. Wally Schwartz stated that a legal opinion should be secured before formulating any guidelines.

The issue was tabled until the NAIA-ATA meeting in June.

IV. General Discussion

John Baxter cited a letter he received from Alex Brown questioning the need for written guidelines for the behavior of NAIA Trainers. Mr. Baxter pointed out that trainers have guidelines set down by the National Athletic Trainers Association and he felt these were sufficient.

Gary Smith read a letter from Jerry Krummel, past president of the NAIA-ATA in which Mr. Krummel asked the group to discuss minimal standard services for visiting teams.

Jim Riley stated that because of the lack of trainers, equipment, etc., at NAIA schools, it would be helpful to have blanket rules.

Gary Smith thought that this topic would be relevant for an article in the NAIA News and he volunteered to begin working on it.

Wally Schwartz called for articles for the "Trainer's Corner" of the NAIA News.

Business Meeting of the NAIA News Athletic Trainers Association Saturday, March 15, 1986 - The Vista International Hotel, Kansas City, MO.

I. President Gary Smith called the meeting to order and introduced the officers of the NAIA-ATA.

II. A motion was made by Al Ortolani to approve the minutes as written from the last meeting in San Antonio. Gary Smith seconded the motion. Passed unanimously.

III. Old Business

A. Wally Schwartz reported that the recommendations made to the Executive Committee met with the following results:

1. Cheering modification approved
2. Rule to require pre-participation physical exams disapproved because it is administratively unfeasible and it infringes upon institutional autonomy

B. Nominations for secretary - nominating committee

Wally Schwartz suggested the past president should work with him on a nominating committee.

John Baxter suggested and so moved that he begin the work on the nominations from the floor this year and discuss a nominating committee at our summer meeting.

C. Preview of summer meeting in Las Vegas

Al Ortolani will set up the NAIA-ATA meeting in Las Vegas for the second day of the National Athletic Trainers Association meeting to be held on April 4, 1986. The Joint Commission meeting will take place on the two days preceding the convention.

One agenda item will be discussing the possibility of changing the March meeting so that it will not conflict with district meetings.

IV.A. NAIA-approved physical examination forms were distributed for evaluation

Al Ortolani felt a stronger statement of risk was necessary.

Gary Smith suggested those present have their team physicians review the forms and suggest needed changes.

B. Topics for next year's March meeting

Nancy Diehl suggested Assumption of Risk would be an important and timely subject. Herb Appenzeller, Athletic Director at Guilford College, was suggested as a speaker.

C. Gary Smith reported the joint session of the NAIA-ADA and NAIA-ATA in this convention was attended and well received.

D. Development of an NAIA-ATA Acceptable Standard of Care Statement. It was felt that the NAIA statement should be utilized by the NAIA-ATA.

E. Wally Schwartz announced that the NAIA Hall of Fame dinner was set for 10:00 p.m. on March 26, 1986. John Baxter from Emporia State College was to be inducted into the NAIA Hall of Fame. Mr. Schwartz congratulated Mr. Baxter and thanked him for his many years of service to the NAIA.

V. Motion for adjournment by Al Ortolani. Meeting adjourned at 3:30 p.m.

III. NFL PLAYERS ALUMNI ASSOCIATION:

NAPA-ATA, seconded by District 3 and carried 9-0, with District 4 abstaining, to accept Tanda McMillin, American River College (District 8), and Susan Bryant, Cumberland College (District 9), as members of the NAPA Committee.

V. NATA LOGO:

Moved by District 3, seconded by District 5 and carried 9-0, with District 7 abstaining, to allow the Executive Director to negotiate with the Iowa State student trainers and advisor, Frank Randall, to sell decals and merchandise these products.

Moved by District 5 and carried 10-0 to accept the information concerning member use of the NATA logo and the licensing of the NATA logo as information only.

VI. MERCHANDISING OF PRODUCTS:

Moved by District 6, seconded by District 8 and carried 10-0 to accept the correspondence regarding merchandising of products as information.

VII. REAPPOINTMENT OF EXECUTIVE DIRECTOR:

Moved by District 3, seconded by District 1 and carried 10-0 to reappoint Mr. Davis as the Executive Director.

VIII. ELECTION OF VICE PRESIDENT:

Mark Shama, District 10, was elected Vice President of the NATA for 1986-87.

IX. HISTORY AND ARCHIVES:

It was indicated that no report had been submitted for consideration or action by this committee.

X. COPYRIGHT OF "ATC":

A brief informational report from Mr. Davis indicated that this issue was still in the process of being worked on.

XI. LEGAL COUNSEL:

It was indicated that no report had been submitted from Legal Counsel.

XII. SCHERING SYMPOSIUM:

Mr. Davis briefly commented on the program arrangement for this year, indicating that this year's program would be around the issue of Legal Aspects in Athletic Training. Mr. Davis also suggested that next year's symposium be held on the general subject of injuries involving athletes.

XIII. APPROVAL OF ADDITIONAL INFORMATIONAL ITEMS:

Moved by District 10, seconded by District 2 and carried 10-0, that the following additional items be accepted as information:

- National Association for Girls and Women in Sports
- National Athletic Head and Neck Injury Registry
- National Collegiate Athletic Association Football Rules Committee
- National Strength and Conditioning Association Trademarks
- The National Athletic Head and Neck Injury Registry liaison report is as follows:

April 4, 1986
Otto Davis
Executive Director
National Athletic Trainers' Association
c/o Philadelphia Eagles Veterans Stadium
Philadelphia, PA 19148

RE: Linson Report - National Athletic Head and Neck Injury Registry

Dear Otto:

The Registry is in the process of completing data collection for the 1985 football season. Once again, we have received excellent cooperation from the NATA members.

At the upcoming NATA Clinical Symposium we will present a seminar on serious and catastrophic cervical spine injuries as outlined on the attached sheet. Once again, Dr. Torg and I look forward to particip-
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   Center bar yields to high impact loads.

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The National Collegiate Athletic Association Football Rules Committee liaison report is as follows:

MEMO

TO: Otho Davis, Executive Director, NATA
FROM: Warren Morris, ATC
DATE: April 15, 1986
SUBJ: NCAA Football Rules Meeting

No meetings or action have been set for the 1987 NCAA Football Rules Meeting. I will forward those dates and meeting site when I hear from the Chairman.

I have been appointed on a subcommittee to study injuries regarding artificial turf vs. natural grass. Dr. Puffer - UCLA, Dr. Milzer - Mon Snouto, Coach Taff - Baylor, Coach Edwards - BYU, Dave Nelson, NCAA Football Rules Secretary, Homer Rice - Chairman NCAA Football Rules are also on this committee.

The AMA Medical Aspects and Competitive Safeguards is going to do a survey.

Enclosed are the NCAA Football rules changes for 1986, my report to the Committee and my survey for rules changes.

MEMO

TO: Homer Rice, Chairman
FROM: Warren Morris, ATC
DATE: January 20, 1986
SUBJ: Football Rules Committee Meeting

Once again the National Athletic Trainers Association is grateful to be here and to be included in this year's NCAA Questionnaire. The results of our survey is attached to this report. We would like to comment on a few of our observations during this past football season.

Care and prevention of injuries to the players is our main concern so we will comment on most of these questions that are concerned with the safety of the athlete.

The Trainers were in favor of the kickoff being from the 35-yard line, but the kicking game is an area where an increase in injuries could occur.

In the section on Offensive Use of Arms And Hands, suggestions for rule changes were:

1.) To standardize the penalty to make officiating easier.
2.) The use of the arms and hands is safer than using the head as a primary point of contact.

One suggestion on stopping crowd noise was for the officials to stop the players from cheeringleading and encouraging the crowd for more noise.

The synthetic surface has always been controversial and the Trainers would definitely support a Rules Committee Sponsored Research Project to study artificial vs. natural grass and injury tendencies (99% in favor). One other comment was to require spring steel insert in all shoes that play on artificial surfaces.

Suggestions to reduce the length of the game were:

1.) Limit the number of TV timeouts, and limit the total amount of time for TV timeouts (90 seconds).
2.) Do not stop the clock on out of bounds passes, field.

1.) Stronger enforcement of face mask penalties. (15 yards)
2.) Add striking with the face mask. The butting and ramming rule.
3.) And making an automatic first down penalty for 9-12 when a player runs into or tackles a receiver when a pass is not catchable, piling on and face mask grabbing.

Disqualification was strongly supported for dead ball fouls on both teams. We feel that more protection of the passer and kicker is needed. We strongly feel that new signals for:

1.) Sideline warning
2.) Spearing, butting or ramming is necessary and may help encourage the officials to make the call when necessary.

The National Athletic Trainers Association would like to compliment the officials for the increased awareness of injuries. We also would like to commend this Committee for its sincere efforts in the prevention of injuries.

The National Strength and Conditioning Coaches Association liaison report is as follows:

April 4, 1986
Otho Davis
Philadelphia Eagles
Broad St. and Pattison Ave.
Philadelphia, Pa. 19148

RE: NATA/NSCA Liaison

Dear Otho:
The National Strength and Conditioning Coaches Association (NSCA) is pleased to continue its liaison relations with the NATA. Manyfeel that this is a worthwhile activity for our organization. They are and have been most perceptive to any suggestions and recommendations that have been made by the NATA and its members concerning the NSCA and its obligations.

This year's NSCA National Convention will be held at the Hyatt Regency Hotel at New Orleans, LA, June 20-22. At this time I will meet with the executive director and other officials of the NSCA and convey to them whatever ideas or suggestions the NATA has to offer.

I plan to be in Las Vegas for the liaison meeting on June 9 to discuss any ideas that the NSCA has pertaining to the NATA and vice versa. A number of excellent presentations will be made by coaches, physiologists, nutritionists, physicians, and athletic trainers.

The second NSCA Conditioning specialist certification examination will be given on June 18 at three sites simultaneously. The three cities will be New York City, Long Beach, CA, and New Orleans, LA. The NSCA is continuing its relationships with PES in the certification process and has had many helpful suggestions from various NATA officials and members concerning certification. Over 100 individuals were certified by the NSCA this past year. A number of those certified also held certification from the NATA.

A major concern with both organizations is the current situation concerning the use of anabolic steroids in athletics. I was in contact with all members of both organizations in dealing with this most serious problem.

Yours Sincerely,
Dan Wathen, ATC
Head Athletic Trainer
Youngstown State University

Anabolic Drug Use Examined by NSCA

Lincoln, NE - Anabolic drug use by athletes raises questions centered on physiology, physical capacities and performance. Additional concerns for safely improving performance, promoting fair play, and protecting the health and safety of athletes have been raised. There are 33 different types of anabolic steroids that can be prescribed for this purpose. Some Trainers recommend that all international linemen should wear them. We would strongly recommend that no Trainers wear them.

Dr. Cramer for information purposes.

Moved by District 10, seconded by District 3 and carried 10-0, to accept the report written of this Ad Hoc Committee for informational purposes.

XV. AMERICAN ASSOCIATION OF HIGHER LEVEL ATHLETIC TRAINERS

Moved by District 4, carried 10-0 that this report be accepted for informational purposes.

XX. CANADIAN ATHLETIC THERAPIST ASSOCIATION

Moved by District 10, seconded by District 3 and carried 10-0 to accept this report for informational purposes.

The liaison report is as follows:

MEMORANDUM

TO: Otho Davis
FROM: Mark J. Shnab
DATE: March 20, 1986
SUBJ: CATA/NATA Liaison Report

On Saturday, March 15, 1986, I went with Dexter Nelson and discussed matters pertaining to CATA/NATA relations. The following is a summary of the major topics discussed.

1. We agreed that one of the first steps is to open communication needs to become more familiar with the logistics and roles of sports medicine in Canada. We both have something to offer. We can learn and share with each other.

2. Future consideration be given to discussing possible reciprocation within certification processes or ways that their guidelines become more congruent with ours and vice versa. Let's dialog it up until 1982 Canada's certification process was ahead of ours. Changes most recently made have ours more advanced. It was agreed that Paul Grace and the CATA counterpart would have to meet at some point in the future.

3. Many students come from Canada to attend college in the U.S. They gain clinical hours in athletic training and many become certified. However, of the 1800 hours only 599 count as they are not familiar with the matter and an expression of opinion that more information be obtained for presentation to the Board regarding this matter. It was moved by District 6, seconded by District 4 and carried 10-0, that this issue be temporarily tabled.

XV. APPOINTMENT OF CERTIFIED ATHLETIC TRAINERS

Moved by District 8, seconded by District 7 and carried 10-0 that representatives to all of the groups that the NATA has liaison with seek a letter endorsing or appointing certified athletic trainer at the high school level for practices and contests with the President to have the discretion to make a special case for certain organizations.

XVI. CRAWFORD PRODUCTS, INC.

Moved by District 9, seconded by District 3 and carried 10-0, to accept the correspondence in relation to Crawford products.

XVII. RAWLINGS SPORTING GOODS COMPANY

Moved by District 6, seconded by District 3 and carried 10-0, to accept the correspondence from this firm for informational purposes.

XVIII. AD HOC COMMITTEE - APPOINTMENT OF REPRESENTATION

Moved by District 10, seconded by District 8 and carried 10-0, to accept the written report of this Ad Hoc Committee for informational purposes.
again in Las Vegas.

Attached is information Dexter gave in his talk at the recent District 10 meeting.

XXI. AUSTRALIAN SPORTS MEDICINE FEDERATION:

Moved by District 6, seconded by District 2 and carried 10-0, that this report be accepted for informational purposes.

XXII. ACCIDENT DEATH INSURANCE:

Mr. Davis encouraged the Board members to continue to make their district members aware of the importance of this insurance and especially having their members exert their best efforts to continue with their CEU credit activities in order to qualify for this insurance. It was then moved by District 3, seconded by District 2 and carried 10-0, that this report be accepted for informational purposes.

XXIII. EASTER SEAL CAMPAIGN:

Mr. Davis indicated that while there was no written report to present, that the Board might wish, at some future date, to consider aligning the NATA with this organization as a “good cause” organization, among others, to possibly be aligned with.

XXIV. HONOR AWARDS:

Moved by District 4, seconded by District 1 and carried 10-0, that beginning at the 1987 convention, the Twenty-Five Year Awards will be given at the National Business Meeting as opposed to the Awards Banquet.

Moved by District 6, seconded by District 1 and carried 10-0, that all Honorary Awards criteria and rules and regulations be incorporated into the Procedures Manual, with the criteria to be approved by the Board of Directors, this to be done prior to November 1, 1986, for all Honors awards and districts.

Moved by District 3, seconded by District 8 and carried 10-0, that the applications and recommendations for Honor Awards be published in the full issue of the NATA Journal.

XXV. INTERNATIONAL GAMES:

Moved by District 7, seconded by District 8 and carried 10-0, that this report be accepted for informational purposes.

XXVI. UNITED STATES OLYMPICS COMMITTEE:

Moved by District 7, seconded by District 8 and carried 10-0, that this report be accepted for informational purposes.

XXVII. LICENSURE:

Moved by District 3, seconded by District 10 and carried 10-0, that this report be accepted for informational purposes.

XXVIII. MEMORIAL RESOLUTIONS:

Moved by District 6, seconded by District 8 and carried 10-0, that this report be accepted for informational purposes.

Movement of a motion to approve the candidacy of a Minority Athletic Trainers Committee to be used for the purpose of working solely in behalf of the specific needs of all minority trainers.

Following a receipt of further detailed information at a subsequent Board meeting, the Board acted as follows:

Moved by District 5, seconded by District 7 and carried 10-0, that Mr. Phil Horton, (District 9) Florida Atlantic University, be appointed as Chairman of the newly created Minority Athletic Trainers Committee.

Moved by District 4, seconded by District 1 and carried 10-0, that the夔uates of the committee would be to (1) promote and encourage membership in the Minority Athletic Trainers Committee, (2) develop procedures to increase the distribution of educational materials, (3) promote the importance of certification, (4) develop audiovisual aids, in conjunction with the Audio Visual Committee, that feature minority athletic trainers; (5) develop and conduct workshops as approved by the Board of Directors; (6) cooperate with the Executive Director and Board of Directors on matters relative to the athletic trainer.

XLII. CONVENTION COMMITTEE:

Moved by District 9, seconded by District 8 and carried 10-0, that the convention report be approved.

Moved by District 3, seconded by District 6 and carried 10-0, that past Hall of Fame members, beginning in 1987, be invited to the President’s Reception and that all invitations sent out for the President’s Reception be screened through the National Office and the Executive Director.

XXXII. AMERICAN PHYSICAL THERAPY ASSOCIATION:

Moved by District 4, seconded by District 5 and carried 10-0, that Mr. Dennis Miller’s report concerning this organization be accepted for informational purposes.

XXXIII. NATIONAL ACADEMY OF SPORTS VISION:

Moved by District 1, seconded by District 9 and carried 10-0, that this report be accepted for informational purposes.

XXXIV. SPORTS MEDICINE CONGRESS:

Moved by District 9, seconded by District 10 and carried 10-0, that this report be accepted for informational purposes.

XXXV. NATIONAL HIGH SCHOOL ATHLETIC COACHES ASSOCIATION:

Moved by District 10, seconded by District 8 and carried 10-0, that this report be accepted for informational purposes.

XXXVI. STUDENT TRAINER AND COACHES ATHLETIC TRAINER WORKSHOPS:

Moved by District 6, seconded by District 4 and carried 10-0, that this report be accepted for informational purposes.

XXXVIII. INTERNATIONAL SUMMER SPECIAL OLYMPICS COMMITTEE:

Moved by District 4, seconded by District 3 and carried 10-0, that this report be accepted for informational purposes.

XXXIX. MODALITIES IN EDUCATIONAL PROGRAMS:

Moved by District 6, seconded by District 10 and carried 10-0, that this report be accepted for informational purposes.
TO: Bobby Barton
RE: Grants and Scholarship Committee Report; Committee be reapproved. It was carried 10-0, that the present members of this committee be reapproved. Moved by District 6, seconded by District 3 and carried 10-0, that Mike Calvillo, Antioch, CA (District 8), and Leo Dougherty, Fargo, ND (District 5), be added as members of the committee. Moved by District 3, seconded by District 6 and carried 10-0, to approve the balance of the report for informational purposes. Moved by District 10, seconded by District 1 and carried 10-0, to accept the resignation of Dennis Murphy, University of Montana (District 10), from this committee. Moved by District 10, seconded by District 5 and carried 10-0, that Mr. Scott Richter, University of Montana (District 10), be accepted as a member of this committee.

XLIV. AUDIO VISUAL AIDS COMMITTEE: Moved by District 6, seconded by District 7 and carried 10-0, to accept the March 28th report from Dr. John Wells, Chairman of the NATA Drug Education Committee.

XLVII. GRANTS AND SCHOLARSHIPS: Moved by District 6, seconded by District 10 and carried 10-0, to accept the April 5th report for informational purposes.

The report is as follows:

TO: Bobby Barton
Otho Davis
NATA Board of Directors
RE: Grants and Scholarship Committee Report; (For June Board Meeting)

Item 1
Committee Members and Duties
Bobby Barton - Ex-Officio
Robert H. Gunn - Candidate Selection
Linday McLean - Candidate Selection
Charles Mclntyre - Representative to Professional Basketball Trainers Fund
Bob Reese - Representative to Professional Football Trainers
Jerry Rhea - Student Banquet, NFL Liaison
Ron Sendor - Corporation Fund Raising
Richard Vandervoort - Representative to Professional Basketball Society Fund Raising

Item 2
This year we have increased the amount of each scholarship to $1500. We have also increased the number of scholarships which will be given from 2 in 1985 to 26. The reason for this increase in the number of scholarships is due to:

a. A $5000 contribution from the WBA Athletic Foundation. We have to thank R. Richard Ray, the Athletic Trainers at Hope College in Holland, Michigan, for directing this contribution from the WBA to the Grants and Scholarship Fund.

b. A $1500 donation from Bike Athletics.

c. An additional $1500 from the Professional Football Trainers Society and Graduate Guidelines, 1984 edition. You... the Trainer

XLVIII. NOCSSAE:
Following the brief presentation by Mr. Ned Ehrlich as to the present activities and status of this organization, it was moved by District 10, seconded by District 9 and carried 10-0, to accept this report for informational purposes. Moved by District 5, seconded by District 6 and carried 10-0, that Mr. Davis be appointed as a representative to the July meeting of this group if Mr. Ehrlich cannot be in attendance at the two-day July meeting, with the issue to be further addressed at the Mid Winter Board Meeting.

L. JOINT COMMISSION ON COMPETITIVE SAFEGUARDS AND MEDICAL ASPECTS OF SPORTS: Moved by District 6, seconded by District 5 and carried 10-0, to accept this report for informational purposes.

L. CERTIFICATION: Moved by District 10, seconded by District 1 and carried 10-0, to accept the Board of Certification report as presented by Mr. Paul Grace, Chairman of NATA Board of Certification.

LII. NATIONAL FOUNDATION: Moved by District 5, seconded by District 7 and carried 10-0, that Mr. Davis and Mr. Mclntyre be given authority to develop a plan to allocate resources for a possible Headquarters move and construction of a Hall of Fame site.

LIII. PROFESSIONAL EDUCATION:
Moved by District 7, seconded by District 6 and carried 10-0, that the athletic training education programs (curriculums) at the following colleges/universities be granted for an additional five-year period from June, 1986 to June, 1991:

1. University of Pittsburgh (Pennsylvania)
2. East Stroudsburg University (Pennsylvania)
3. Pennsylvania State University
4. Mankato State University (Minnesota)
5. University of New Mexico
6. University of Southern Mississippi
7. Boise State University (Idaho)
8. University of North Carolina (graduate)
9. University of Oregon (graduate)

Moved by District 10, seconded by District 4 and carried 10-0, to accept the resignation of Dennis Murphy, University of Montana (District 10), from this committee.

M. EXHIBITS:
Moved by District 10, seconded by District 7 and carried 10-0, that the implementation of this issue was not the forward movement of the Association and the feeling was that the implementation of this issue was not the number one priority at this time.

N. POSTER SESSIONS:
Moved by District 6, seconded by District 7 and carried 10-0, to accept the March 28th report from Dr. John Wells, Chairman of the NATA Drug Education Committee.

O. NATA IN A VIGOROUS POSSIBLE RELOCATION OF THE HEADQUARTERS:
Attention was again called to the desires of various district members relative to the present activities and status of this organization, it was moved by District 10, seconded by District 9 and carried 10-0, that Mr. Davis be appointed as a representative to their subsequent curous meetings in further detail the present status and forward movement of the Association and the feeling that the implementation of this issue was not the number one priority at this time.

P. UNIFICATION:
Moved by District 6, seconded by District 7 and carried 10-0, to accept the reorganization of Dennis Murphy, University of Montana (District 10), from this committee.

Q. COMPLIANCE WITH CODES OF PRACTICE:
Moved by District 6, seconded by District 7 and carried 10-0, that the implementation of this issue was not the forward movement of the Association and the feeling was that the implementation of this issue was not the number one priority at this time.

R. NCHCA:
Moved by District 9, seconded by District 10 and carried 10-0, to accept this report for informational purposes.

S. NATIONAL FOUNDATION:
Moved by District 5, seconded by District 7 and carried 10-0, that the University of Delaware, West Chester University, Miami University, California State University, University of Nebraska and the University of Nevada be placed on probation for a period of one year effective June, 1986, due to the violation of guidelines as indicated in the report.

Moved by District 4, seconded by District 6 and carried 10-0, to table to the Board's Wednesday morning session, item 9 of the report.

Moved by District 8, seconded by District 5 and carried 9-1-0, with District 8 being opposed, to accept item 10 of the report concerning increase in fees to a health care agency making application as an allied clinical setting.

Moved by District 4, seconded by District 10 and carried 10-0, to table for mail vote the proposed revisions in the Undergraduate Guidelines, 1983 edition, and the Graduate Guidelines, 1984 edition.

Moved by District 10, seconded by District 4 and carried 10-0, to accept the materials in the report concerning incorporation of Graduate Athletic Training Education Programs.

LIV. PUBLIC RELATIONS:
Moved by District 10, seconded by District 8 and carried 10-0, that the policy statement concerning corporate sponsorship as presented by Mr. LeGear be accepted as amended.

Moved by District 7, seconded by District 1 and carried 10-0, that both Mr. Rick Ball and Mr. Ned Ehrlich be accepted as spokespersons for the NATA.

Moved by District 10, seconded by District 4 and carried 10-0, that Mr. Davis be directed to clear all of his budgetary matters with Mr. Davis prior to taking any action.

Moved by District 1, seconded by District 8 and carried 10-0, that the balance of Mr. LeGear's report be accepted for informational purposes.

LV. AMERICAN ACADEMY OF PEDIATRICS:
Moved by District 10, seconded by District 9 and carried 10-0, that this report be accepted for informational purposes. The report is as follows:

American Academy of Pediatrics Annual Report
June 1986

TO: Robert Barton, President
FROM: Richard F. Malacrea
RE: NATA Liaison with the American Academy of Pediatrics, Committee on Sports Medicine.

The list of Committee members, liaison representatives and staff is attached (Appendix A). This was the last meeting for Dr. Eugene Lackestand, for his term of appointment had expired. The representative from the National Association for Sports and Physical Educa-
YOUR ENTIRE SEASON COULD BE LOST BY ONE CRAMP AT THE WRONG TIME...

MOST PRO TRAINERS USE SLO-SALT®-K AND FOSFREE®...

SLO-SALT®-K and FOSFREE® insure physiologically balanced electrolyte levels. FOSFREE® stops leg and major muscle cramping in cramp prone athletes. FOSFREE® also provides a comprehensive vitamin format. FOSFREE® tablets used one hour before practice and game time help prevent most troublesome leg and muscle cramps. SLO-SALT®-K is the first line of defense against heat fatigue, and hot weather loss of performance. In addition to potassium, sodium, and chloride, SLO-SALT®-K releases slowly, over a 3 to 4 hour period, which means continuous replacement of electrolytes. SLO-SALT®-K and FOSFREE® provide total coverage in your athletes.

For more information please call toll free 1 (800) 531-3333 or in Texas 1 (800) 292-7364.
tion was absent.  

**A.A.P. Headquarters**  
The Washington, D.C. representative staff of the A.A.P., Ms. Susan Campbell, noted that the prime concern of that office was the number of program cuts affects school children caused by the recently enacted Gramm-Rudman legislation. Significant cuts were in place this fiscal year with greater retrenchments anticipated for fiscal year '87. The Elk Grove (A.A.P. Headquarters) report repeated the directive to the Committee on Sports Medicine (Appendix II), the report was highlighted by the apparent need to reorganize space and plan new space in the headquarters building. This building was completed less than three years ago.

**LIASON**  
Your liaison representative reported on the most recent additions to the list of states having some form of athletic trainer credentialing, as well as those areas having or proposing a mandate for an athletic trainer at the secondary level. The growth of the NATA was noted and the scope of our public relations efforts, through corporate sponsorship, outlined. The press packet supplied by Mr. John LeGear of Timothy Communications was presented. The result of the recent NATA Presidential Election was announced and Dr. Robert Barton cited for his years of dedicated service.

**BABYCIZE**  
The Committee addressed the request for an endorsement of a new video cassette program titled BABYCIZE by citing the lack of evidence that exists to indicate that, indeed, a program of this type could benefit fitness for infants.

**COED COLLISION SPORTS**  
The Committee addressed the growing issue of coed collision sports (see Appendix III). Dr. Jean Emmons, MD., guest participant, was consulted on the physical and psychological aspect of coed sports and on the topic of the female athlete. The result of this discussion was that the committee will stand on the issue of the use of anabolic androgenic steroids as a means of enhancing performance in sport.

**STATEMENTS**  
The Committee reviewed a number of its statements to reaffirm previous positions, modify a position in light of new data, and to continue to provide current resource documentation to the pediatric practitioner. To give a thumbnail sketch of these, it can be stated that the Committee continues to oppose the use of anabolic androgenic steroids, would encourage much more vigorous programs of physical fitness in schools, desires to develop a comprehensive program of sports medicine in the pediatric residency program, sees little value in "Infant Exercise" or "Infant Drownproofing and Swimming" programs, continues to support well-rounded programs of organized athletics, and cautions parents in allowing the use of skateboards, motor bikes, and A.T.V.'s. The Committee had 1) again taken a strong position in opposition to the use of the trampoline and mini-tramp, and 2) will revise its "Guidelines for Health Supervision" and "List of Disqualifying Conditions for Sports Participation".

**MANUAL**  
The last work session revolved around the rewrite of the "Problems of Coed Collision Sports", the consolidation of the statement on the statements on "The Female Athlete" and "Amenorrhea", and the elimination of the statement on "Participation in Sports by Girls".

**AMERICAN COACHING EFFECTIVENESS PROGRAM**  
Representatives from Ross Laboratories were invited to participate in a discussion of possible involvement in support and promotion of a youth/coaches certification program. Dr. Mike Nelson, involved in the Albuquerque, New Mexico, A.C.E.P., outlined what he had started in his community and asked if Ross Labs would consider becoming involved in supporting and promoting this to pediatricians on a national scale. The Ross representative cited several programs of this nature, some already on a national scale, and offered to explore all of the possibilities of involvement in existing programs sponsored by various organizations.

**BOXING**  
After long discussion, the committee reaffirmed its position on boxing for children and young adults (See Appendix IV). At this time, there does not seem to be room for compromise with the positions taken by the U.S.O.C. and other pro-boxing groups. Dr. Paul Dyment, Committee Chairman, cited the false reasoning that it is a controlled sport governed by a point system. His counter argument was that an individual could be far ahead on points and lose by a knockout.

**SELF APPRAISAL CHECKLIST FOR HEALTH SUPERVISION IN SCHOLASTIC ATHLETIC PROGRAMS**  
A small sample follow-up in the national mailing to each secondary Director of Athletics revealed that 31 of 40 did not recall seeing the checklist (Appendix V). This was quite disappointing; however, no conclusions will be drawn until a second and third follow-up are completed. If the returns are spotty, a statistical analysis will not be undertaken and these allocated funds spared. The Committee would welcome regional or state follow-up through local or state athletic organizations.

**HOW TO BUILD A BETTER ATHLETE**  
You need to build strength and endurance. Train hard. Eat nutritionally. And make Nutrament part of that nutrition.

Nutrament provides vitamins, minerals, protein and carbohydrates necessary for muscle growth and development. It's also high in calcium. And because it's a liquid, it digests easily. For more information, call 1-800-632-1684.
for the edition of the manual, Sports Medicine: Health Care for the Young Athlete (Appendix VI). Chapters will be edited, deleted, added and combined. The chapter on athletic training will be incorporated into a broader chapter dealing with all of the health care professionals involved in the sports medicine programs. The chapter on athletic uses of adhesive tape will be expanded to include other external supports.

The Committee on Sports Medicine of the American Academy of Pediatrics is viable, active, and central in the development of standards for the delivery of health care to school-aged athletes.

LVI. AAOSM:
Moved by District 9, seconded by District 8 and carried 10-0, to accept this report for informational purposes.

LVII. ETHICS:
Moved by District 3, seconded by District 4 and carried 10-0, to accept the following resolution:
RESOLVED, That the By-Laws are amended to include the preamble; membership standards, procedures and sanctions and certification standards, procedures and sanctions.

LVIII. MISCELLANEOUS:
Moved by District 8, seconded by District 9 and carried 10-0, that the Board of Directors authorize the adoption of an antitrust compliance policy.

LIX. RESEARCH AND INJURY:
Moved by District 6, seconded by District 7 and carried 10-0, to accept the Research and Injury report for informational purposes and to direct John Powell to continue to check regularly with Mr. Davis regarding all financial expenditures.

LX. MEMBERSHIP:
Moved by District 6, seconded by District 5 and carried 10-0, that the membership report, as presented by Mr. Bruce Melin, be accepted for informational purposes.

LXI. NATIONAL SCHOOL BOARD ASSOCIATION AND AMERICAN ASSOCIATION OF SCHOOL ADMINISTRATORS:
Moved by District 6, seconded by District 7 and carried 10-0, that the report made by Dr. Bill Prentice regarding his attendance during the past year at the meetings for these two groups, be accepted as information.

LXII. ADJOURNMENT:
The meeting was adjourned for the purpose of the Board members attending the Annual Business Meeting.

The Board reconvened in session again on Wednesday, June 11, 1986, at eight o'clock a.m., with Mr. Jerry Rhea, President, presiding, with the following in attendance and with the following agenda items being considered and actions being taken... 

Mr. Jerry Rhea, President
Mr. Otho Davis, Executive Director
Mr. Charles Redmond, District 1
Mr. Hal Biggs, District 2
Mr. Andy Clawson, District 3
Mr. Dennis Miller, District 4
Mr. Denis Ieow, District 5
Mr. Paul Zeek, District 6
Mr. Mike Nesbitt, District 7
Ms. Janice Daniels, District 8
Mr. Doug May, District 9
Mr. Mark Smaha, District 10
Mr. Bruce Melin, Parliamentarian

LXIII. COMMITTEE AND COMMISSION APPOINTMENTS:
Moved by District 6, seconded by District 2 and carried 10-0, that Gordon Graham be approved as an NATA liaison representative to the Joint Commission.
Moved by District 10, seconded by District 5 and carried 10-0, to accept Bobby Barton as Chairman of the Public Relations Committee.

LXIV. PLACEMENT:
Moved by District 3, seconded by District 2 and carried that the Board accept the following as members of the Placement Committee, this information to be mailed out in accordance with normal administrative procedures:
Craig Sisk, Chairman
Phil Mateja, District 1
Rick Zappula, District 2
Terry Middleworth, District 3
Wayne Vaupel, District 4

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continued on page 294
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Presenting the custom-made brace you can take credit for.

You asked for it. You asked us to create a brace with all the strength and performance capability of the Lenox Hill you're already prescribing—only lighter in weight.

After two years of development, refinement and testing, we are happy to make available the Lenox Hill Lightweight. It's the brace for your everyday patient who needs solid "Lenox Hill" support, but doesn't need the extra weight required for contact competition.

Is it custom made?

We wouldn't put the Lenox Hill name on a knee brace that wasn't custom made. Using your cast mold, we build each Lenox Hill Lightweight to fit the exact requirements of your individual patients.

Is it any more expensive?

We make it our business not to pass on any of our research and development costs. So we're offering this second Lenox Hill at the same low price that you pay for the original Lenox Hill design.

Call us if you have any questions about the new Lenox Hill Lightweight. And as you begin putting your patients in it, let us know what they think of the brace you helped make possible.
The intent of this program was to build greater understanding for the athletic training profession and the focus has been on the 5.6 million high school kids and their safety.

Yesterday the Board of Directors officially approved a policy statement that we had been working up for the past year and I would like to read that to you.

"The NATA believes that we, as a society, have a moral obligation to provide a common defense against sports injury for 5.6 million United States interscholastic athletes. In assessing the situation since 1976, the NATA, as a national governing body for allied health care professionals in the field of athletic training, has determined that effective injury management and prevention programs are absent in the vast majority of secondary schools.

It is the opinion of the NATA that lack of a basic understanding about the need and value of a verifiable health care plan in high school athletic programs is responsible for thousands of preventable sports injuries and re-injuries. As such, the NATA has set out to enhance public understanding of injury management and prevention methods currently available.

In the opinion of the NATA Board of Directors, consistent, quality health care can and must be part of the package that student athletes receive when they participate in high school sports. To convey the message, the NATA welcomes counsel and assistance from schools and others who share its view.

Sponsors or corporate sponsors of the public education program are recognized for the support they provide to fuel the NATA's nationwide public education effort. However, sponsorship support should be construed as a sponsor of the NATA public education program, and not NATA endorsement of sponsors' products or services."

Now, at this point, I would like to show you a couple of public service announcements that we have done with Ivy Cross and others during the past year. ... Whereupon, several of last year's public service announcements featuring Mr. Cross and Mr. Dennis Miller were presented ...

MR. LeGEAR: Of course, as I indicated previously, the target of these efforts are primarily for the parents of school-aged children and secondary school athletes. These are the people we are trying to reach with this program.

The goal of the NATA public relations program is to make that target audience more aware that high school sports injuries can and must be reduced. I might say that about seventy-five million individual high school athletes are at risk. We hope to make a difference.

Before proceeding, I would like to announce that at this time there will be a two-hour workshop on the NATA public relations program, from two to four p.m. today in Rialto Room 2. We feel that both of these programs is responsible for thousands of preventable sports injuries and re-injuries. As such, the NATA has set out to enhance public understanding of injury management and prevention methods currently available.

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Software that’s smart for your system

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ALFIE software, which can be run on either the IBM-PC or Apple //e - Apple //c systems, can greatly reduce the task of record-keeping that is associated with athletic injuries.

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If film will not bank already before the first of the year
but we hope very much that you will be able to use the
film just as you used the nine-minute slide show
we produced for you last year.

In closing, I would like to thank you and I would
expect that the three people I have been putting
up with me in the promotion of this endeavor
— Mary Edgerley, Otho Davis, and Bobby Barton.

Thank you very much. (Applause)

PRESIDENT BARTON: Thank you very much, John.
Our appreciation for your work is indicated by
our upset letter to have you around a few more
years. The Board of Directors, as well as myself,
make no secret of the esteem in which we are extremely pleased with John's
work thus far.

I have never attempted to keep secret that I am
behind the promotion of this organization completely.
I have never intended to make any secret that I believe
we need corporate sponsorship for it to be an effective
program, and I have said many times at district
meetings, I take the blame for, about six years ago,
thinking that we could get our job done for $45,000. I
proposed that budget to the Board. Being a good,
supportive Board, they went along with me. I am the
one that ended up with egg on my face. I was wrong. I
greatly underestimated the cost of public relations and
that is when we began searching for additional
venues.

Our corporate sponsorship program reached an all-
time high this year. Obviously we are glad that Quaker
Oats is excited about us and we can always deluge that
Johnson and Johnson has joined our team.

Obviously, Johnson and Johnson is known through-
out America as the world's premier manufacturer of
products known throughout the world in relation to
supplying medically-related products not only for
athletic trainers but for the entire medical atmosphere
of this world.

I had many honors as President but none has been
greater than to have the opportunity to work with
Johnson and Johnson in bringing them into the fold.

This actually started over a year ago and the first
time I met Mr. Jack Weakly was in San Antonio, at last
year's national meeting. He and Jim Viola had actually
asked me if I could get Mr. Johnson and Johnson to
help in this public education program. Needless to
say, we had the answers for them when they asked
that question.

Mr. Davis, myself, and Mr. LeGrar had the oppor-
tunity to speak to several of their administrators, but
particularly Jack Weakly, in developing a program
that we are not just happy with but we are elated with.
I am pleased with it due to the credibility of Johnson and
Johnson.

At this time I would like to have Mr. Jack Weakly
come forward and make a presentation in the
flank area. He has been involved for quite a number
of years in the advancement of athletic trainers and

PRESIDENT BARTON: Thank you, Bobby. (Applause)

MR. LEGRAR: Thank you, Bobby. Many of you may know or some of you may know
that Johnson and Johnson, this year, will celebrate its
first one hundred years in business. Also, I might add,
that one of our first products, ninety-nine years ago,
was adhesive tape on a spool and, at that time, it cost
just 3¢ and so we are kind of holding the price for you.

(Laughter)

We can think of no better group to go into our second
hundred years with than the NATA.

One of our guiding principles is to serve the communities in which we work and in which we live.

You folks do that.

I think this public education program goes a long
way in improving that.

Thank you very much. (Applause)

PRESIDENT BARTON: Thank you, Jack.

At this time I would like to call upon our financial
consultant, Mr. Brooks McIntyre, to come forward and
give us his financial report.

MR. BROOKS MCINTYRE: Thank you, Bobby.

As of the end of this fiscal year, which was April
30th, the NATA, including the National Office, Board of
Directors, Scholarship Committee, and the NATA Foundation, had assets, total assets of
$1,471,644; had liabilities which the organization
owned $129,505, which left us with a fund balance
net worth of $1,342,139.

The net worth of the organization increased during the year by more than $100,000 of revenues.

Also, during the year, we received our first revenues from contributions by Mr. J and J and Gatorade.
Also, let me say again, as I did last year, that I fully
support the corporate sponsorship program primarily
because it helps us to accumulate the necessary resources for the organization to achieve its goals.

The financial health of the organization is the
strength it has ever been. I have no reason to think
that this trend will not continue. I commend Otho,
and the Board on their excellent management of
the assets of your organization.

I will be glad to answer any questions you may have
concerning this report. Thank you very much. (Applause)

PRESIDENT BARTON: I would be remiss if I did
not say at this time that I had occasion to be curious and so
I looked up at that time that when Otho Davis became
our Executive Director, we had less than $3,000 in the
bank and I know that Otho feels a great sense of pride in
our going from a million dollars over a mile high this year.
and he certainly should take great pride in that. I am
delighted to have the association that I have had with him and the way he really speaks to his work for this
organization. (Applause)

I would undertake a motion to accept the Treasurer's
report.

I have a motion by Skip Cox of District 6 and Troy
Young of District 7 to accept this report.

All those in favor of accepting this financial report
indicate by saying yes; opposed; abstentions. It is
unanimously carried.

I would now ask our Executive Director to come
forward, Mr. Otho Davis, who will give a summary of
the Board of Directors. (Applause)

Our Board of Directors has done a great deal and I want to
again express my gratitude to the Board who, as I say,
have worked right up to the last minute. We completed
our business and got here just in time.

MR. OTHO DAVIS: Your Board has been meeting
continuously since our Friday and terminated its meetings
just about fifteen minutes prior to the beginning of this
session.

I would like to ask you to join me in congratulating
the following Twenty-Five Year Award winners here and give the
names of the following Twenty-Five Year Award
winners.

Robert S. Behnke
Richard M. Holmboe
Thomas W. Couch
Phillip B. Dotley
Donald E. Prell
Douglas E. Frey
Joe H. Gieck
Fred D. Ketley
Edward C. Kwest
Paul D. Kichline
Robert H. Lundy
James W. Marshall
Leo W. Marshall
George E. Memfes
J. Lindsey McLean
John L. Poole
Joseph L. Proski
Jack Rea, Jr.
Thomas E. Thompson
John C. Wells
William Wiedergott
Al Wilson
Troy L. Young
Paul T. Zeek

PRESIDENT BARTON: Thank you very much, Troy.

I will now ask Otho Davis to inform you of the people
that will be received into the Hall of Fame tomorrow night.

MR. DAVIS: The Hall of Fame winners are as follows:

Edward Raymond Abramson
Henry L. "Buck" Andel
George C. Anderson
William H. Caberly
Chester A. Grant
Eugene I. Harvey
Carl Edmund Nelson

Curtis Roy Rylander
William C. Sankm
Fred A. Wappel

PRESIDENT BARTON: Thank you, Otho.

At this time, I would like to call your attention to those
members of our Association that passed away
since our last meeting. They are as follows:

Allen Coder, Montclair State College
Martin Ferguson, University of Texas in Austin
Virginia Military Insti-
ute

John Kiser, Loyola College
Frank Raskavich, Cornell
Pamela Mouchka, University of Wisconsin, La-
Crosse
Dean Nesmith, Kansas
Jake Nevin, Villanova
Bob Price, Texas
John Sciara, Retired, State University of New York at Cortland
George Spanos, Hamlin University
Thomas Sullivan, Princeton

PRESIDENT BARTON: May God grant these great
professionals and their loved ones eternal peace. Thank
you.

At this time I would like Mr. Richard Ray of Hope
College, to come forward and make a presentation in
behalf of the WBA Football Foundation.

MR. RICHARD RAY: I am here today to represent
the WBA Athletic Foundation.

The WBA stands for "We Believe in Athletics" and it is
also a relatively new foundation that has been established
through the estate of a gentleman by the name of Mike
Ruster.

Mr. Ruster was man who, before his death a few
years ago, was totally dedicated to the advancement of
amateur athletics, especially in the Great Lakes Region.

The WBA feels a strong commitment to the work
athletic trainers do and because of this, it gives me great
pleasure to present this check for $5,000 to the
NATA Scholarship Fund.

— Mary Edgerley, Otho Davis, and Bobby Barton.

PRESIDENT BARTON: Thank you very much, Rich.

I would like to say that it is just fantastic that he is now
a member of this organization and to have athletic
trainers placed in positions such as this is certainly
a great reward and result of some dedicated work.

I would now like to invite Ms. Sara Paxton of
Nutrament to come forward.

Ms. Paxton, as you are all well aware, is with
Nutrament and has been involved for quite a number
of years with our Athletic Trainer of the Year Awards
and will make those nominations at this time.

MS. SARA PAXTON: Thank you, Mr. President.

On behalf of Nutrament and the Druckett Company,
I wish to express our continued pleasure to be associ­
ated with NATA in sponsorship of the Athletic Trainer
of the Year Awards.

Through this award, twenty-six of your members
have been recognized as one of the best. They have
received national recognition from the members of
their profession. That is indeed a high honor and we
are proud to be a part of it.

This is a major recognition for the Athletic Trainer of the
Year Awards. It was ten years ago that the first
Trainer of the Year Awards were given. We have tried to
give this an experience for some very deserving people and it has been very special for
us, too — indeed, very rewarding for us to get to know
many of you and to share in the experience of the
awards with the recipients and their families.

And now, Mr. President, I would like to introduce this
year's Athletic Trainers of the Year. Each one is a
first-time recipient.

First I would like to tell you about the high school
winner, Charlie Henry, who could not be here today.
Charlie is a loyal Texan who has never lived more than
thirty-five miles from Galveston Bay.

He graduated from Lamar University in Beaumont,
Texas, and has worked as a trainer at both very large
and very small high schools, as well as the Houston
Oilers.

Charlie now lives in Anahuac, Texas, population
2,000, where he teaches history at Anahuac High, in
addition to his athletic training duties for five major
sport teams.

Charlie has been active in his profession, serving as
President and Vice President of the Southwestern Athletes Trainers Association.

He has been a featured speaker at this national
convention, at the Texas High School Coaches Conven­
tion and at numerous workshops and in-service
training programs.

Twice Charlie has been named All-Star Trainer for
the Texas High School Coaches Association Game and he
is also the recipient of the Fellowship of Christian Athletics All-Star Trainer Award and the Eddie
Worci Award for Outstanding Contribution to the
introduces a new generation in exercise equipment, the Aquatoner,
a lightweight device used in water for lower, middle, and upper body exercises.

Resistance with the Aquatoner is easily controlled and adjusted for gentle rehabilitation or for power
and intense workouts. Opposite and multiple muscle groups can be exercised during the same repetition
or negative resistance for an isolation with an adequate pool jet. Contraction can be obtained from
the point of stretch. The source of resistance is from all directions, not from gravity or a cable system
and the obvious movement limitations of stationary equipment.

Reduced joint stress, the safety factor of the water buoyancy, and the freedom of natural movement
are the major advantages of the Aquatoner besides economics over all other progressive resistance equip­
ment, weights, and exercise machines. The versatility of the Aquatoner is shown by its successful use
among physical therapists, athletic trainers, hospitals, medical centers for the disabled and handicapped,
arthritis, YMCA classes, schools and universities, health spas, professional athletes, football teams,
strength and conditioning coaches, the U.S. Olympic Committee, the U.S. Marine Corps, and others.

The series of adjustable diometrical paddles fan out from 36 to over 860 square inches of surface area
on the largest unit for increased work loads. On one side is a handle and on the other side is a foot/ankle
strap. The Aquatoners are placed on bars for variations in the equipment. The handles and paddles
are made of durable copolymer. The straps are webbing, vel-cro, and a soft cushion. The bars are
sunlight resistant Carlon. There is an illustrated book by Douglas Bedgood, “Exercising With The
Aquatoner”.

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(704) 497-6820
Jerry has served his profession on numerous committees and the local, regional, and national levels. Currently, he is Chairman of the National Audio Visual Committee.

Additionally, Jerry has been chosen as athletic trainer for a number of national and state tournaments, including the National Junior College All-Star Football Game. May I present the Junior College Athletic Trainer of the Year, Jerry Nowesnick. (Applause)

Mr. President, the Collegiate Athletic Trainer of the Year is Jack Baynes. Will you please stand, Jack, and take a bow. (Applause)

Now, for our final award, we have a gentleman who has spent twenty-five years with one team. Fred Zamberletti is celebrating a silver anniversary this year with the Minnesota Vikings and he is reputed to be the only member of the Vikings staff who has been there longer than Bud Grant.

Fred is originally from Iowa. He graduated from the University of Iowa, where he also earned a graduate degree in physical therapy. Next came a tour with the United States Army, a year as a physical therapist, and a year as head trainer at the University of Toledo.

Then Fred joined the Vikings in their first year, 1961, and he has been there ever since. Fred has become quite an establishment. In Minneapolis, he has received a Distinguished Citizen Award from the city. Fred is widely recognized in sports medicine circles, having made numerous presentations at orthopedic medical meetings and at NATA clinical symposiums. Fred has been an inspiration to many young athletic trainers, including last year’s winner and his former assistant, the very young Kent Falb.

It is most appropriate that this year’s donation from Nutrament to the NATA Scholarship Fund be made in the name of Fred Zamberletti.

Fred, will you please stand and be recognized. (Applause)

Recipients of these awards each receive $1,000 scholarships or equipment and Nutrament donates $4,000 to the NATA Scholarship Fund in honor of the professional team winner.

Mr. President, I am pleased to present a check for $7,000 in honor of the Athletic Trainers of the Year. . . . Check presentation and applause ensued . . .

PRESIDENT BARTON: Thank you very much, Sara. I am very pleased to accept this money, as I am all of our scholarship gifts.

At this time, I would like to call upon Mr. Paul Grace, our Chairman of the Certification Committee, to announce the winner of the Eddie Wajecski Scholarship Award.

MR. GRACE: The winner of that award is Terry Stocker of San Diego, California. (Applause)

This award is sponsored by Mueller-Sports-Medicine, Inc.

PRESIDENT BARTON: I would now like to call on Dr. Joe Gieck of the University of Virginia, who himself was a recipient of the award last night as Outstanding Educator, to announce the American Orthopedic Society for Sports Medicine Distinguished Service Award.

DR. GIECK: This year’s award winner is Don Fauls of Florida State University. (Applause)

PRESIDENT BARTON: Thank you. I would now ask Frank George of Brown University, a former NATA President who is doing an outstanding job in relation to our scholarships, to announce these winners to be included in the minutes of this meeting.

MR. GEORGE: First of all, let me extend my special congratulations to Bobby as he leaves his term of office and only I know how happy he can be. (Laughter)

Also, good luck to Jack Rhea who is coming in and, in relation to Jack Baynes, I never heard that slogan before. (Laughter)

However, again, thank you for giving me this opportunity to be the Chairman of this committee and also I wish to extend my thanks and appreciation to my committee members for their assistance this year.

As probably many of you know, we have increased the amount of each scholarship from $1,000 to $1,500. We have also increased the number of scholarships which were given out last year from twenty-one to
twenty six. The reason for this increase in number of scholarships is due to a number of things.

First of all, the $5,000 contribution from the WBA Athletic Trainers Scholarship Fund is extended. We also extend our thanks and appreciation to Richard Ray, a former scholarship winner, for the work he has done with that foundation over the years.

Also, we have a new donor to the Scholarship Foundation in relation to continuing scholarships from Bike Athletic Trainers. It donated $1,500 and the additional $5,000 came from the Professional Football Athletic Trainers' Society and Gatorade for establishing the Edward Block Memorial Scholarship. I also wish to extend thanks to the NFL. Their total contribution was $20,000 with an annual contribution of $5,000. We thank you very much.

Also, a special thanks to Ms. Paxton and the Dackett Corporation for their support throughout the years. We really appreciate it. Also, to Dick Hoover, for his funding of the Student Trainer banquet that we had last night.

In the intervening years, let me say that this banquet has certainly grown. For example, when I was on the Board, they had to often beg us to go there and really tell us that we had to go to that banquet. However, last night we had over 400 people there and everyone that I asked was here at the meeting and was a presenter. And so it has become a big thing, it really has. Therefore, we thank Dick Hoover for his funding of that.

This year we had eighty applications that met the February deadline. Let me make sure next year that you meet the February 1 deadline.

They met all of the criteria and we were able, as a result, to select award winners. This gives us a year of about thirty-three percent which, in scholarship terms, means they are pretty good. However, I would like for it to be better.

I would now like to announce the names of the winners of the Graduate Scholarship Awards and they are as follows:

- Jon A. Gurramone, Arizona State University. The sponsor was the National Football League Charities, Scott A. Goble, Anderson College. The sponsor was the WBA Athletic Foundation.
- Charles Havercorn, Jr., University of Texas, with the sponsor being the Professional Football Athletic Trainers Society/Gatorade.
- Kathryn F. Liska, University of Tennessee at Martin, with the sponsor being the Bike Athletic Company.
- Kent Depner, Western Montana College, with the sponsor being the Professional Baseball Athletic Trainers Foundation.
- The winner of the Robert H. Gunn Scholarship Award is Randall W. Roues of Texas Christian University, the sponsor being the National Athletic Trainers Association.
- The winner of the Sayers J. Miller, Jr., Scholarship Award is Paul E. Welder of Indiana State University, the sponsor being the National Athletic Trainers Association.

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- The winner of the Sayers J. Miller, Jr., Scholarship Award is Paul E. Welder of Indiana State University, the sponsor being the National Athletic Trainers Association.
- The winner of the Chuck Cramer Scholarship Award is Harold J. Einsig, West Chester University, with the sponsor being the scholarship award itself.
- The winner of the Frank Cramer Scholarship Award is Tomi-Jo Budin, of East Carolina University, with the sponsor being the scholarship award itself.
- The winner of the William F. Liska Scholarship Award is Marian C. Thomas of the University of New Mexico, with the sponsor being Johnson and Johnson Products, Incorporated.
- The winner of the William E. Newell Scholarship Award is John A. Jones, University of Pittsburgh, with the Chatterton Corporation being the sponsor.
- The winner of the Otho Davis Postgraduate Scholarship Award is Don L. Manger of Brigham Young University, with the sponsor being the WBA Athletic Trainers Association.
- The winner of the Del C. Humphrey Postgraduate Scholarship Award is Teri L. Handy of Springfield College, with the Schutt Manufacturing Company being the sponsor.
- The winner of the G.E. "Moose" Detty Postgraduate Scholarship Award is James L. Andy of Northeastern University, with the sponsor being the PRO Orthopedic Devices, Incorporated.
- The winner of the Good-Smith Postgraduate Scholarship Award is Lisa C. Monaehl of Ithaca College, with the sponsor being School Health Supply Company.
- The winner of the William M. Bundy Postgraduate Scholarship Award is Jennifer A. Mosack of Western Michigan University, with the sponsor being the Harold W. Mundy Scholarship Foundation.
- The winner of the Schering Plough Foundation Postgraduate Scholarship Award is Mark A. Amundson of South Dakota State University, with the sponsor being the Schering Plough Foundation.
- The winner of the Edward Block Memorial Postgraduate Scholarship Fund is Elizabeth Schuts of West Virginia University, with the sponsor being the Professional Football Athletic Trainers Society.

The winner of the Postgraduate Scholarship Award is John R. Wawryniak of Canisius College, the sponsor being the National Basketball Trainers Association.

Another winner of the Postgraduate Scholarship Award was Dr. Arlene L. Mandel of California State University at Los Angeles, with the sponsor being the Cyrex Division of Laxem Corporation.

The winner of the Postgraduate Scholarship Award was Janelle A. Thomas, Marietta College, the sponsor of which is the WBA Athletic Foundation.

Another winner of the Postgraduate Scholarship Award is Lisa J. Balsar, Lock Haven University, with the sponsor being the American Orthopedic Society for Sports Medicine.

Another winner of a Postgraduate Scholarship Award was Janet A. Cline, University of South Carolina, with the sponsor being the National Football League Charities.

Another Postgraduate Scholarship Award winner was George T. Dwyer of University of South Florida, with the sponsor being the WBA Athletic Foundation.

And, lastly, the winner of the Eddie Wojcicki Achievement Award was, as announced previously, Terry Stocker and the sponsor of this award is Mueller Sports Medicine.

Congratulations to all of our scholarship winners. Thank you very much also for your various self-sponsorship. Please continue them and, again, thank you very much. (Applause)

President Barton: Thank you very much, Frank.

At this time I would like to have Otho Davis come forward. He has a variety of special awards to present at this time.

Mr. Davis: The first gentleman I would like to recognize is an individual that I have been associated with for a number of years. In reality, one of the people behind the scenes. You never see him around. Also, the man would like to have recognized is Tim Kerin from our Convention Committee because Tim Kerin is the individual, as a member of the Convention Committee, who is in the most direct contact with this person at the present time.

Mr. Kerin: Of course, we all know that we cannot put this show on every year without the help of the Local Committee but there is then a gentleman that works behind the scenes. As a matter of fact, we tried to figure out who this man is and have not been able to come up with a figure. Now, maybe Frank or someone else may be able to come up with it, but we sort of estimate he has been working behind the scenes here for around nineteen years and we really have not done a thing for him.

He comes in, as a matter of fact, does his job and then he goes back out and the next time we see him again is next year.

Gentlemen, I am talking about the individual that takes care of the arrangements concerning all of our exhibitors, the people who pay for our convention. At this time, I would like to recognize Mr. George Budig of the George E. Fern Corporation in Cincinnati, Ohio, and say, George, we know you for all the work you have done for the NATA behind the scenes for over twenty-six years. We have not been able to accept this token of appreciation.

... Presentation of momento and applause ensued ...

Mr. Viedove: This gentleman really does it all, the way from the collecting of your registration fees, depositing money in the bank, paying all of our bills and then sending us a check when it is all over. We certainly appreciate all of your efforts, George.

The next man that I would like to honor at this point is a long-time, long-standing, long-time friend, Paul Zeek. It gives me a great deal of pleasure, Paul, to present this plaque to you for your service as a Board member and also to apologize ... 

Presentation of plaque and applause ensued ...

Mr. Zeek: Thank you, Otho. Let me say it has been a pleasure doing this over these many years. Really this is just the best you can get in the Association. I did not do much of anything. (Laughter)

You know, I have been asked for Bobby Dunn doing such a whale of a job, none of us would be where we are. Again, thank you very much. (Applause)

Mr. Davis: The winner of the Otho Davis Postgraduate Scholarship Award is John A. Jones, University of Pittsburgh, with the sponsor being the PRO Orthopedic Devices, Incorporated.

The winner of the Good-Smith Postgraduate Scholarship Award is Lisa C. Monaehl of Ithaca College, with the sponsor being School Health Supply Company.

The winner of the William M. Bundy Postgraduate Scholarship Award is Jennifer A. Mosack of Western Michigan University, with the sponsor being the Harold W. Mundy Scholarship Foundation.

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Congratulations to all of our scholarship winners. Thank you very much also for your various self-sponsorship. Please continue them and, again, thank you very much. (Applause)

President Barton: Thank you very much, Frank.

Again, thank you very much. Paul, to present this plaque to you for your service as a Board member and also to apologize ...

Volume 21 Number 3 — Fall 1986 • Athletic Training 293
realize that I have stuck my neck out a little bit on
have been spent with Paul Grace and Otho Davis,
appreciate what they have all done. I know what it is to
stick your neck out a little bit for something new. I also
travels, the opportunity to travel with both of you
and the darkest roads throughout my term of
office...the ability to serve on this Board and then to you, the
professionally in my life.
Likewise, I would like to thank District 9 for allowing me
to serve on this Board and then to you, the
have some 9,000 members now and so let us endeavor
to give them some acceptable alternatives. Do not
merely tell us that you do not like what we do, but also
attempt to give us suggestions as to a better way to do
it. We live with coaches all the time who follow that
procedure — they always criticize but never have a
way of correcting things.
Again, let me say that we are wide open to your
suggestions and comments. We really and sincerely
want you to hear from you.
With that, at this time, I would like to ask if there is
any new business to be presented. If not, I will be
happy to entertain a motion for adjournment.
Whereupon, in accordance with motion duly
made and unanimously carried, the business
meeting was, at twelve-thirty-five o'clock p.m.,
adjourned.

Summary of Actions from page 286
Denise Fandel, District 5
George Young, District 6
Larry Hall, District 7
Jerry Lloyd, District 8
Bon Medlin, District 9
Phil Luckey, District 10
LXV. JOURNAL:
Moved by District 6, seconded by District 10 and
carried 10-0, that this report be accepted for infor-
mational purposes with the Executive Director being
directed to work the Mr. Steve Yasse (in relation to
financial and general) operating matters.
LXVI. ADJOURNMENT:
There being no further business to be transacted, the
meeting was, in accordance with motion seconded,
conducted and adjourned at twelve-thirty o'clock p.m.

Advertisers
Athletic Training Services .................. 294
Athletic Training Specialists ............ 295
Billy Gunn Athletic Company ................. 266
Champion Sports Nutrition ............... 252
Chattanooga Corporation .................... 255
Chattanooga Corporation, Education Division .......... 264
Cramer Products, Inc. ................. Cover 4
Cybex ........................................ 196
DePuy ........................................ 231
Drackett/Nutrament ......................... 285
Eagle Fitness Systems ....................... Cover 3
Electro-Med Health Industries .......... 251
Elgin Exercise Equipment Corp .......... 260
Ferno-Illy ................................ 249
Foot Management, Inc. ................. 229
Gatorade ..................................... 244
Health Sciences Center .................... 283
H.I. Moore Medical Supply .............. 259
HPBooks, Inc. ............................. 270
I. Brown Mfg. Co. of ................. Hartley, Inc. ......................... 240
Hartley, Inc. ................................ 240
Innovation Sports ......................... 237
I.P. Systems .................................. 289
Kona Fitness, Inc. ......................... 291
Lencos Hill Brace, Inc. ............... 287
Mission Pharmacal Co. ................. 284
Northeastern University ................. 258
Omni Scientific, Inc. ...................... 280
Pro Orthopedic Devices, Inc. .......... Cover 2
Quality Industries .......................... 272
Sports Supports ............................ 268
Swede-O Universal ............... Time OUT .................. 274
Universal .................................. 261

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