IN THIS ISSUE:
CUSTOM MADE PADS
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MYOTONIC MUSCLE DISTRESS
1973 CONVENTION MINUTES

VOLUME 8
NUMBER 4
DECEMBER 1973
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FROM THE PRESIDENT'S DESK

Dear Fellow Trainers,

I apologize for not including more correspondence to you through the Journal and have no reason except the same we all have - football season.

Work has been progressing on the Athletic Care Act. Apparently some of you have been following up on our request to suggest positive and progressive changes in the proposed legislation and we can report favorably that there is much interest by your Congressmen and the amended document is on its way. Representative Edwin Forsythe of New Jersey has proposed a 4-year study amendment to Congressman Dellums' original bill which should allow adequate time and funding to hammer out the type of legislation which is workable and worthwhile.

It has been noted in the past few months that some of the violent objectors to the legislation last summer, when it was originally proposed, have changed 180° now that there is a possibility of money forthcoming for study purposes. If the membership will go back to the original discussions presented to you after Otho Davis and myself conferred with Congressman Dellums' staff, it was brought out that the basic idea or proposal was not in a finalized form but was started in order to encourage, or even force, people to work on this pressing need for having Teacher-Certified Athletic Trainer personnel on the staffs of every school in the country. Many individuals, and Districts, reacted violently and negatively without even trying to understand what was being worked for. Fortunately, there have been enough far-sighted trainers working for the proposal that it is moving forward. It is not "buried" as some have stated; it is not going to "doom" interscholastic athletics, as others have loudly cried; it is not going to "ruin" the N.A.T.A., as has been frightfully forecast. And it has not been railroaded by a few N.A.T.A. officers, as many have been told.

You should be grateful to men like Otho Davis who have steadfastly refused to give up the goal of providing competent care for the young people participating in interscholastic athletics throughout the nation. The goals and objectives of the proposed legislation may take a number of years to accomplish, but will never be realized if we don't work toward them.

So again I appeal to each and every member of the N.A.T.A. to contact your District Director for new information concerning the progress of the study and legislation. Send copies of our excellent new brochure composed by Mel Blickenstaff to your Congressmen and to your school administrators. And above all, send your ideas, thoughts, and advice to your officers and Board of Directors.

The future of Athletic Training is unlimited. The need for competent, well educated athletic trainers is great now, but the future needs - not only in schools but in industry - are nearly beyond comprehension. Let us have the foresight to work now to fulfill the future.

Bobby Gunn
PRESIDENT
BOOK REVIEWS
By Ken Murray, Certified Athletic Trainer

CONDITIONING PROGRAMS
FOR EACH SPORT
Pre-Season—Regular Season—
Off Season

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Atl. Trainer
Assoc. Prof. of P.E.
Southern Ill. Univ.
List price $2.00
Cheaper as you order more
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Schwebel Printing
P.O. Box 433
Murphysboro, Illinois 62966

Bob Spackman has written a conditioning booklet for 15 different sports. These include: conditioning for officials, football conditioning, ice hockey, gymnastics, wrestling, tennis, golf, swimming, track and cross-country, soccer, skiing, physical education, handball, paddleball, and a few others.

So many coaches are asking for a conditioning program for their own sport, as well as ones that can be used with limited equipment. So with this in mind, these books were written.

The reviewer read the one for conditioning of officials and football players. They were extremely informative with good information. They are small enough for each person to carry around in his pocket so he can use it anywhere.

In summary, a good little book with basic information on conditioning for individual sports.

HOCKEY FROM THE ICE UP
by Tommy Woodcock
Trainer of the St. Louis Blues
List price $5.95 + $.50 postage
181 pages illustrated
422 South Hanley Road
St. Louis, Mo. 63105

This is a broad book covering the whole subject of hockey. It is a well written book covering such topics as mental attitude, skates, general equipment, goal tending equipment, care of equipment, conditioning, day of a game, hockey injuries, and hockey schools. To a person that knows nothing about hockey, it is extremely informative and easy to understand.

From a trainer’s viewpoint, this reviewer does not agree with the author’s recommendation on such training topics as pre-game meals as well as the use of fluids on the bench. But as the author stated, different trainers have different viewpoints. This is one area this reviewer feels the author needs to do more research in.

To sum the book up, a well written book with good information on hockey, especially for the youngster. The information on treatment of injuries and training does not go along with the reviewer’s viewpoint, but may not be completely wrong.

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LETTER TO THE EDITOR

Dear Editor:

The area listed as current literature by Tom Waugh has been very helpful to myself and I am sure many others. If possible I would like to make one suggestion that might be of assistance for those who are referring to the articles mentioned under Tom’s column. If it is possible for the inclusion of the address of the particular journal that has been mentioned, it would be much easier for a person to make contact with the author or the journal for obtaining reprints of the articles in which they are interested. As it is now it is necessary to either refer to an old journal if the person has it on hand or it is necessary for him to call the local or state medical journal office to obtain the address of the journal in question. I hope you will mention this to Tom as it will be a great assistance to the readers in making contact for those items of their particular interest.

Sincerely,
Professor Karl K. Klein
The University of Texas at Austin

Dear Professor Klein:

Thank you for your letter concerning our “Current Literature” section of Athletic Training. We are always interested in constructive ideas on improving our Journal.

Mr. Ed Christman, at the College of William & Mary, has taken over the “Current Literature” portion from Tom Waugh. Ed, whenever possible, will now include the address of the journals for the membership’s convenience. Should a Journal have more than one article listed in any one section the address will be given only in the first listed article.

However, many journals do not handle reprints and will refer you to the author for them, so the process may still be involved.

Thank you for your interest.

Sincerely,
Editor

EDITOR’S COMMENTS

CANCER CLAIMS FELLOW TRAINER

Alan W. Hart, Ohio State University Head Trainer, died of cancer on November 25, 1973 at the age of 38. He was an outstanding, dedicated trainer and wonderful man who truly cared for others’ problems.

An “Al Hart Endowment Award” is being developed as a memorial to this fine man. The award will be given to a deserving senior student trainer at Ohio University, where Al was head trainer for 12 years. A pledge card for this fund is included in the Journal for your convenience, should you wish to contribute to this most worthy project.

Al will be sadly missed by all of us and our most sincere thoughts and sympathy go to Al’s wife, Abby, and his two little daughters, Amy and Allison. We should make every effort to express our friendship and brotherhood in this memorial award.

THANK YOU JOURNAL COMMITTEE!

This issue of Athletic Training marks the end of the first volume since I became Editor-in-Chief in January 1973. As it is very fitting with this time of year, I would like to count my blessings and thank all of those who have helped me with the Journal, but a special thanks must go to the members of the Journal Committee. The whole crew appears in this issue. Now, with a group like that how can I go wrong!

ATHLETIC CARE ACT

If the Athletic Care Act, spon-

sored by the Honorable Ronald Dellums, is to be a success it must have the support of trainers, physicians, administrators, and parents. The Bill not only could help provide better medical care for athletes, but also advance the status of our profession. Should you need information on this Bill contact Otho Davis.

WELCOME ABOARD

Athletic Training would like to welcome Ed Christman of the College of William and Mary to the Journal Committee. Ed will take over Tom Waugh’s position, handling the “Current Literature” section. Tom Waugh has left the profession to go into business in Texas.

SEASONS GREETINGS!

Rod Compton
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**Help prevent athlete’s foot reinfection with** TINACTIN Powder Aerosol...Cooling, soothing...Aids drying of moist areas...Odorless, easy to apply.

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**Athlete’s foot**
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Write for our
comprehensive catalog,
see your Champion salesman,
get your order in now.
We make your job easier
... because we've been in the
field for 54 years.
November 29-December 1, 1973 — The American College of Physicians of the Northwest Region will hold its meeting at Bayshore Inn in Vancouver, British Columbia. For further information, contact Dr. Donald S. Monroe, 2765 Heather Street, Vancouver 9, British Columbia, Canada.

December 6, 1973 — A regional meeting of the American College of Physicians will be held at Duke Medical Center in Durham, North Carolina. For further information, contact Dr. Joseph B. Stevens, 1017 Professional Village, Greensboro, North Carolina 27401.

December 7, 1973 — A regional meeting of the American College of Physicians will be held in Houston, Texas, at the Houston Oaks Hotel. For further information, contact Dr. Robert A. Hettig, Baylor College of Medicine, 1200 M.D. Anderson Boulevard, Houston, Texas 77025.

December 8, 1973 — The Central States Chapter of the American College of Sports Medicine will hold its annual meeting at the University of Kansas in Lawrence, Kansas. For further information, contact G. Harley Hartung, Department of Physical Education, Central Missouri State University, Warrensburg, Missouri 64093.

December 14-16, 1973 — The American Academy of Orthopaedic Surgeons will sponsor a course on “Current Status — Joint Replacement,” in Miami Beach, Florida. The chairman of this course is Dr. Augusto Sarmiento, P.O. Box 875, Biscayne Annex, Miami Beach, Florida 33152.

December 27-28, 1973 — A symposium on “Innovations in Athletic Conditioning and Sports Medicine” will be held by the Continuing Education in Sciences and Mathematics, University of California, Berkeley. The site will be the Marriott Inn, Berkeley Marina, Berkeley, California. For further information contact Nathan W. Cohen, Curriculum Development in Science, University Extension, University of California, Berkeley, California 94720.

January 19, 1974 — The American Optometric Association will hold its “Vision in Sports and Recreation Activities” in San Antonio, Texas. Headquarters will be in the Placio del Rio Hilton Hotel. Contact George M. Milkie, 7000 Chippewa St., St. Louis, Mo. 63119 for further details.

February 9, 1974 — The Dallas-Fort Worth Metroplex Trainers’ Clinic will be held at Grand Prairie High School in Grand Prairie, Texas. For further information, contact Bob McClintock, Athletic Trainer, Grand Prairie High School, Grand Prairie, Texas 75050.

Athletic Training will be happy to list events of interest to persons involved in sports medicine, providing we receive the information at least two months in advance of publication. Please include all pertinent information and the name and address of the person to contact for further information. This information should be sent to Jeff Fair, Athletic Department, Oklahoma State University, Stillwater, Oklahoma 74074.
At its June, 1972 meeting the Professional Education Committee decided a status survey of the association membership was needed. There are a variety of reasons why such studies are needed and the results are useful to not only the various divisions of the national organization but to its members as well. The questions were chosen based upon the immediate needs of the association and its recruitment and professional education efforts.

Of the 1,200 questionnaires sent, 552 were returned, only 502 could be used. The answers were transferred to a scan sheet and run through a computer.

Notice that not all the percentages total 100% because some trainers did not answer all questions. If a composite picture of the profession is desired the “total” column provides the answers.

One could speculate and draw all kinds of inferences from the chart. However, it is suggested to remember that the results represent less than 50% of the NATA membership.

This type of survey will be repeated each year by the Professional Education Committee. The Committee wishes to thank the membership for their cooperation in this year’s efforts and strongly urges all of the members to return next year’s questionnaire promptly so the results can be tabulated in time for next years’ salary negotiations.

FOLLOWING ARE THE SURVEY QUESTIONS:

PROFESSIONAL EDUCATION COMMITTEE QUESTIONNAIRE

1. Membership classification - (Certified (Active)
   (Private)
2. Position Level - a. (H.S.) (College) (Pro)
   b. If Pro, which sport?________
3. Terms of employment - (9 mo.) (10 mo.)
   (1 year) (other)
4. Salary range (annual not including part-time work) - (less $8500) (8500-10,000)
   (10,000-12,500) (12,500-15,000) (over 15,000)
5. Years experience in full-time athletic training - (less than 2) (2-5) (5-10) (10-15) (over 15)
6. Years experience as a student trainer (including high school and college) - (1) (2) (3) (4)
   (5 or more)
7. Educational preparation - (no degree) (B.S. or B.A.) (M.S. or M.A.) (PT degree or certificate)
   (Ph.D. or Ed.D.)
8. Undergraduate Major - (1) Health and/or Physical Education (2) Science (3) Education
   (4) Physical Therapy (5) Other________
9. Do you have teaching responsibilities? (Yes) (no)
10. If yes in 9, what % of your load is teaching? (1/3) (1/4) (1/2) (2/3) (3/4)
11. How many clock hours/week do you teach? (3-6) (6-9) (9-12) (12-15) (over 15)
12. Are you paid extra for teaching? (yes) (no)
13. Are you paid extra for athletic training? (yes) (no)
14. If yes in 13, what salary range? (500 or less) (500-1,000) (1,000-1,500) (1,500-2,000) (over 2,000)
15. Do you teach in the summer? (yes) (no)
16. Do you teach courses other than athletic training and/or first aid? (yes) (no)
17. Do you teach graduate level courses? (yes) (no)
18. If a high school trainer, what subjects do you teach?
19. Is the athletic dept. school financed or separately financed?
20. Is your school (state supported) (public)
   (private) (combination)
21. Who is your immediate supervisor? (coach)
   (A.D.) (Dean or Chairman H & P.E.)
   (Physician or Dir. H. Services) (other)
22. If a physical therapist, do you engage in a private practice in the regular school year? (yes) (no)
23. If a physical therapist, do you engage in a private practice in the summer or at other times in the off season? (yes) (no)
24. Are you required to treat patients other than athletes? (yes) (no)
25. Are you required to treat club and/or intramural athletic injuries? (yes) (no)
26. Is your school interested in hiring an additional staff member? (yes) (no)
27. Are funds available for hiring additional staff next year? (yes) (no)
28. Salary range for an additional staff member - (less than 6,000) (6,000-7,000) (7,000-8,000)
   (8,000-9,000) (over 9,000)
29. Are you the head trainer? (yes) (no)
30. If no in 29, are you: assistant trainer on a 2-man staff
   assistant trainer on a 3-man staff
   assistant trainer on a 4-man staff
   assistant trainer on a 5 or more man staff
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Names of possible recipients must be sent to district directors no later than January 10, 1974
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**Legend:**
- **N**: No data
- **Active**: Number of active individuals
- **Certified**: Number of certified individuals
- **School**: Number of individuals with school credentials
- **Pro**: Number of professional individuals
- **2 yr. exp.**: Number of individuals with 2 years of experience
- **3 yr. vars.**: Number of individuals with 3 years of varsity experience
- **4 yr. vars.**: Number of individuals with 4 years of varsity experience
- **5 year vars.**: Number of individuals with 5 years of varsity experience
- **Grad Coll.**: Number of individuals with graduation college experience
- **Total**: Total number of individuals
- **High yrs.**: Number of individuals with high school experience
- **Active yrs.**: Number of active years
- **Active exp.**: Number of active years of experience

**Note:** The table represents data from various categories such as the number of individuals with specific credentials and years of experience.
NATA MEMBERS:

THE NATIONAL ATHLETIC TRAINERS ASSOCIATION EMBLEM

available in
pins $3.00
patches $1.00
plastic stickers $1.00
watches with leather strap $37.95
bracelet $44.95
from your district secretary

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Scholarships
William E. Newell Scholarship
For applications write to:
William E. Newell
Mackey Arena
Purdue University
Lafayette, Indiana 47907

- Honor Awards -

25 YEAR AWARD. HELMS HALL OF FAME, HONORARY MEMBERSHIP

Names of possible recipients must be sent to district directors no later than January 10, 1974

CURRENT LITERATURE

by Ed Christman
Certified Athletic Trainer


William E. Newell Scholarship

NATA

THE NATIONAL ATHLETIC TRAINERS ASSOCIATION

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pins $3.00
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Why sweat it!

... holds ankles in while it lets sweat out
New Orthaletic Porous Tape protects 64 ankles per team-pack carton. And it upholds our traditional dependable support while this new porous innovation lets the skin "breathe." The diagonal vents formed by a series of unbroken diagonal lines in the adhesive mass provide the porosity. From start to finish, this tape unwinds neatly and easily. It's available in tubes, as well as in team packs. No sweat!

Available through surgical supply dealers. Write for name of your nearest dealer.

Medical-Surgical Products Division
PARKE, DAVIS & COMPANY
Detroit, Michigan 48232

New ORTHALETIC® Adhesive Trainer's Tape, Porous

PARKE-DAVIS
BOILS (FURUNCLES, CARBUNCLES)

L. W. Stauffer, M.D.
Eugene, Oregon

You gamble with very bad odds when an athlete is allowed to compete or work-out during the time he has a boil. Contact with anything much harder than a feather can be dangerous.

Boils are caused by the invasion of a vellus hair follicle by bacteria called coagulase positive Staphylococcus aureus (Staphylococcus Pyogenes). Initially there is a tense, hot, dome-shaped swelling and redness that hurts. There is frequently throbbing pain even at rest. Bumping a boil can be exquisitely painful. If the boil is allowed to progress in its usual way, toxins secreted by the staphylococcus produce necrosis of tissue, resulting in a lake of pus surrounding a necrotic core of destroyed skin and subcutaneous fat.

Untreated, the lesion becomes a boggy, soft, painful mass that eventually ruptures, drains and slowly heals. Most athletes have single boils. An occasional individual will develop multiple lesions and continue to develop new infections.

Studies to determine the mechanics of infection resulting in boils have not been blessed with total success. Rubbing pure cultures of virulent staphylococci into intact, abraded, or macerated skin does not produce boils with significant frequency. Since this infection starts in a hair follicle, it would seem likely some form of internal vascular or lymphatic seeding takes place. Normally, there is a flow of oil under pressure through the follicles to the skin surface. It is unlikely non-motile staphylococci could swim upstream. We really don't know why some people get boils.

"Blood poisoning", which is somewhat of a misnomer, can develop if the local lymphatic system is involved (lymphangitis) and overwhelmed, allowing infection to reach the blood stream and become a septicemia. This is not common, particularly in an individual in good condition.

Thrombophlebitis, an infection in the veins with clotting of blood, occurs much more frequently and is often the result of local trauma. A furuncle occurring on the face above a line extending from ear lobe to the corner of the mouth can be particularly dangerous since a thrombophlebitis of this area can lead quickly to brain abscess. Cupping, squeezing, bumping or incision before adequate "softening" has occurred can lead to thrombophlebitis. Infected clots in a big vein, particularly if ignored, can "grow" toward the heart, small or large segments can break off and form first plugs in the lungs (emboli)—then lung abscesses.

Diagnosis of furunculosis is not difficult. An internally ruptured acne pimple or oil gland cyst can occasionally mimic an early boil but does not have the degree of pain, local heat and necrosis of a boil. When in doubt, manage as if a boil.

Treatment begins with protection of the furuncle from trauma. There should be no participation in physical activity until the team physician determines the infection to be healed. If there is available drainage, culture the material and obtain a sensitivity pattern for available antibiotics. Start immediate adequate dosages of antibiotics rating high in its frequency of potency against staphylococci in your area.

Treat locally with an antibiotic preparation* not used orally. It has been much more helpful in my experience to massage one of these preparations gently into a boil and the adjacent 6" of skin than the somewhat futile washing with hexachlorophene, organically bound iodine preparations or other surface "sterilizing" preparations. More than the surface is involved. It does seem reasonable to suspect that the use of surface bacterial killing products such as hexachlorophene not only will not reach the attack zone, but will alter the normal surface organisms whose presence and action produce a large portion of cutaneous defense against invasion by pathogens organisms.

Massive hot dressings, poultices, etc. really have not been helpful since antibiotics became available.

Incision and draining of a boil should only be done when the boil is fluctuant—when the center is soft, boggy, liquified. Incision into a staphylococcal abscess not yet fluctuant can result in spreading infection.

Use of enzymatic debried-ment agents such as Streptokinase-Streptodornase usually are not needed but on occasion may be helpful.

Anyone chronically involved with boils needs a thorough study. Diabetes must be ruled out. Cultures from his throat and those of close contacts should be taken. Those who show carrier status (non-symptomatic presence of Staph) need adequate treatment with indicated antibiotics.

Equipment such as shoulder pads, elasticized padding, etc. that cannot be laundered to remove potentially infectious material can be fairly well sterilized with formalin fumes. Place one ounce of formaldehyde in each corner of a cardboard box containing the equipment. Tape it air tight for 48 hours. Air the equipment for 12 hours and it is ready for use.

If you have an athlete with what appears to be a boil, a painful, hot, swollen hard place somewhere on the skin, first get him out of all collision type activity, then turn him over to the team physician. Do not try to squeeze, cut, heat or otherwise manipulate the lesion.

Your physician will probably start large doses of antibiotics locally and by mouth. He may or may not use chemical debried-ment agents. He will take a culture for identification of antibiotic sensitivity patterns if this is available. He may order hot

(Cont. on p. 169)
for PROTECTION • SUPPORT • COMPRESSION

THE TRAINERS’ FIRST CHOICE FOR PRE-GAME AND PRE-PRACTICE STRAPPING
TO HELP AVOID INJURIES TO ATHLETES

Elastoplast® “AT”

THE DEPENDABLE ORIGINAL E-L-A-S-T-I-C ADHESIVE - ATHLETIC TAPE

ELASTOPLAST “AT” Athletic Elastic Adhesive Tape adheres firmly...

Has Superior Stretch—from 3 yards slack to approx. 5½ yards—and unexcelled Contraction...

Assures players freedom of action.

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12” x 5½ yards (stretched)

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410-AT  12 rolls  1” cut
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413-AT  4 rolls  3” cut
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Case lots of 12 tubes of same cut available at institutional discount.
The authors of this paper investigated the incidence of unsuspected post-traumatic lesions of the ankle and foot among professional football players. X-rays were taken of the ankles and feet of fifty-nine football players who averaged twenty-three years of age and who had an average of nine and one-half years of playing experience either at the amateur or professional level. None of these players reported a history of serious trauma to their ankles or feet. A control group of fifty males who had never played football was also subjected to x-ray examination of their ankles and feet. This group also averaged twenty-three years of age.

Four types of abnormal x-ray findings were identified: (1) osteoarthritis, (2) peri-articular new bone, (3) dorsal exostoses of the talus, and (4) calcification of the distal interosseous tibiofibular ligament.

Results of the study revealed a significantly higher incidence of abnormal x-ray signs in the ankles and feet of the professional football players than in those of the control group. Ninety per cent of the football players exhibited one or more severe and abnormal x-ray findings while only four per cent of the non-players demonstrated one or more signs. The remaining ten per cent of the football players exhibited obvious but less severe pathological changes in the ankle and foot.

In addition to comparisons made between the two study populations, the football players were divided into three groups on the basis of weight. Group one averaged 255 pounds and consisted of sixteen offensive and defensive linemen. The second group averaged 212 pounds and consisted of twenty-seven offensive backs and linebackers. Group number three included sixteen flankers and defensive backs and averaged 187 pounds.

X-ray examinations revealed a considerably higher incidence of osteoarthritis and calcification of the interosseous ligament among heavier players. The authors discounted the likelihood of this phenomenon being attributed to excessive body weight alone. Rather, they suspected that the position of excessive ankle dorsiflexion which the linemen in the heavy group characteristically assume during their stance was a contributing factor. More specifically, the comparatively wide anterior portion of the talus exerts excessive pressure on the articular cartilage and interosseous ligaments of the ankle as forceful dorsiflexion occurs. The duration of the stress when linemen were required to block against heavy opponents was also thought to be a contributing factor.

Gary Delforge


Working to overcome “swimming pool ear”, or more properly, acute bacterial infectious external otitis, which is fairly common in areas of warm temperatures and high humidity during the summer months, the author tried different combinations of solutions over a six week period at a YMCA camp. The solutions were applied into the ears immediately after swimming. A drying time of at least one minute was necessary before the solution was applied to the other ear.

The solution most effective in preventing swimming pool ear consisted of 5% acetic acid in 85% isopropyl alcohol. This should only be applied to swimmers with clean, uninflamed ear canals and intact tympanic membranes.

G. Graham


Citing four mechanisms of shoulder dislocation, the author describes complications which may appear to the physician and therapist and supplies recommendations of treatment. Citing that many hold that recurrence of shoulder dislocation is preventable through securing the arm to the side for three weeks, London feels that after a day or two, active and passive movement within the limits of comfort will not hasten recurrence. However, a sling is supplied for use when the patient feels a need for the support it offers.

Greg Vergamini

With the growing popularity of little league baseball, this comparative study was undertaken to determine if a non-competitive type little league program would lessen the physical stress placed on an immature youngster involved in baseball activity, particularly pitching. In the paper, the physicians review literature dealing with little leaguer’s shoulder and little leaguer’s elbow. They compare this with their findings based on a clinical and roentgenographic study performed on forty-nine pitchers ranging in age from nine to eighteen years who participated in a low-level competitive program sponsored by the Lighthouse Boys Club of Philadelphia.

The Lighthouse program is set up so that thirty teams, divided by age, are arbitrarily...
chosen. Each team member must play four and one half innings. Each pitcher may pitch seven innings a week and curve ball throwing is permitted.

The pitchers were examined at the conclusion of the program, and roentgenograms of both shoulders and both elbows were obtained. There were no significant findings in the shoulder exam. Eighteen of the pitchers manifested a “valgus attitude of the elbow,” which was attributed to hypertrophy of the muscle mass of the flexor pronator group in the forearm.

Results of the study, although inconclusive, would tend to indicate that a program established for participation and recreation and not competition would be in the best interest of healthy skeletal development and maturation.

Brad Sherman


In this clinical investigation being reported, the author was interested in DMSO’s ability to penetrate intact cutaneous surfaces, its anti-inflammatory effect, its ability to impose nerve blockade or analgesia, and its vasodilatory effect upon the vascular tree proximal to the area to which it is applied.

Seventy-five patients were treated with 80% DMSO gel, or 10% DMSO gel (placebo), or standard therapy in a double-blind, controlled clinical study. Patients were randomly assigned to one of three groups. Forty-five patients had acute strains and sprains; 30 had acute tendinitis and bursitis. The majority of patients with bursitis had the subacromial type. Then per cent DMSO gel was selected as a placebo control because it was able to mimic the cutaneous reactions and breath odor caused by higher concentrations of DMSO, but without therapeutic effects. Standard therapy consisted of rest, diathermy and other physical therapy, injection of corticosteroid medications, oral analgesics, muscle relaxants, and/or splinting with bandage or adhesive strapping.

The duration of therapy ranged from 1 to 14 days with the majority of patients being treated from 3 to 7 days. This was administered topically over the injured part. The total daily dosage of either 80% or 10% DMSO gel ranged from 15 to 45 ml applied in three doses. Patients were observed for the first two hours after the initial treatment, at 24 hours, and on days 3, 7, and 14, if they continued to receive treatment for that period of time.

Thirteen of the fifteen patients with strains and sprains treated with 80% DMSO gel had excellent response while two patients had a good response. In patients with bursitis and tendinitis, receiving 80% gel, there was a greater improvement in active and passive motion following therapy. The most common outward reactions occurring in the 80% DMSO group were skin irritations and breath odor. No other serious toxicity was noted in any of the 75 patients. Use of the DMSO in traumatic injuries lessens the time lost from work.

John Wells


Orthopaedic records show that one or two new patients of every ten treated will show symptoms of what is called the supraspinatus syndrome.

Whatever the cause of this condition, most individuals have similar symptoms. Pain, limitation of movement, tenderness over the insertion of the rotator muscles into the greater tuberosity, muscle spasm, and in more chronic cases muscle wasting, the supraspinatus and infraspinatus particularly. There may or may not be a history of injury at the onset of this condition. It can be a very gradual condition or it may develop very suddenly, requiring urgent care. The lesion is thought to be a sudden necrosis of the tendon. The area most often involved is known to have a poor blood supply, and when damaged, repairs itself with non-elastic fibrous tissue. Therefore, it no longer acts as a shock absorber between the head of the humerus and the acromion. This condition leads to an inflammatory state of the bursa.

Early stages of treatment consist of rest for the involved joint as well as avoiding movements which cause pain. A sling may be in order, however, it is recommended that the individual exercise the shoulder through the full available range of painless motion. This should be done once or twice daily.

The most rapidly effective treatment may be an injection of local anesthetic and hydrocortisone, although there are a few individuals who are not helped. A widespread infiltration is not recommended, rather it must be made into the most tender area. Correct placement of the local anesthetic will be followed by immediate relief of pain. Pain may be as severe or even more than before for a period of 36 hours, however, after this period it usually subsides. Heavy exercise programs should be avoided for a week to ten days for healing to take place.

Tom Carter


An incentive for gaining new and precise information arises from the growing interest in myoelectric devices. For this reason a detailed study was undertaken of the interplay of the activity of the three vasti and rectus muscles in normal adults.

Bipolar electrodes were injected into the middle of the muscle belly of each of the quadriceps muscles. The timing of onset and cessation of activity and grading

(Cont. on p. 182)
Ever wish that someone would come up with a tape and bandage cutter that really worked? That you could cut through several layers with and not have to change the blade after one use? We've got one—The SHARK.

In field testing, trainers and athletes have told us that the new SHARK Tape and Bandage Cutter is faster, easier to handle and more comfortable than anything they've ever used before.

The longer-life, surgical carbon steel blade is so effective and sharp, it will quickly cut through up to 10 layers of elastic tape. Yet it is extremely safe with an easy-to-replace, one-piece blade cartridge that snaps in place in seconds without screws or hooks.

The SHARK is the latest addition to the Protective Products, Inc. complete line of training supplies, which includes ACE® bandages, aerosols, liniments, powders, vitamins, and other products to fulfill your training room needs. All are backed by the extensive testing facilities of P.P.I.'s parent company Becton, Dickinson and Company, a leader in health care products since 1897.

For our new catalog outlining our complete line which also includes helmets, shoulder pads and body pads, write Dept. B, Protective Products, Inc., P.O. Box 291, 1913 E. Pine, Grand Prairie, Texas 75050.

The SHARK is a trademark of Protective Products, Inc.

Introducing The Shark:
P.P.I. will match it against any other tape and bandage cutter on the market for speed and safety.

"We've got a lifetime of health care products behind us."
The Illinois State Medical Society is sponsoring a newsletter for high school coaches and student trainers. The publication is to be called A.I.D.—short for Athletics...Injury and Disease. The intent of the newsletter is to develop an exchange medium to get sports medicine facts to coaches and create a better physician-coach working relationship. Area athletic trainers, coaches, and doctors will be contributing to it.

This project seems to be worthy of further thought and development. Any other states doing something similar?

**URINALYSIS AND DRUGS**

Efforts been made to control drug abuse in athletics has gone to the use of urinalysis. Some pro athletes seem to be upset by this, stating it would be dehumanizing. The NCAA is attempting a volunteer study to determine how use of drugs is going on in the colleges. Most of the criticism of that program is the belief that a volunteer program of testing urine would give results that no one in colleges are using drugs. It is felt that no athlete using drugs would volunteer for the test.

**THE PAINFUL FACTS**

It's impossible to account fully for the suffering—physical and psychological—resulting from over-stressing. Every distance athlete, though, experiences it. It may come in the form of a disabling injury or illness. The ailments may be less serious, but still limiting. Or the signs of stress may come subtly, as “unexplained” poor performances or disinterest in the sport.

A set of statistics gathered from questionnaires submitted by Runner's World readers gives a hint of the extent of stress-related ailments. These figures deal only with foot and leg injuries—those serious enough to require a layoff from training. Only a fraction of the injuries could be traced to specific trauma (accidents, in other words). Most arose from ill-defined “over-stressing.” These are the injury leaders among nearly 900 distance athletes:

- Knee Damage 17.9%
- Achilles Tendons 14.0%
- Shin Splints 10.6%
- Arch Injuries 6.9%
- Ankle Injuries 6.4%
- Foot Fractures 4.9%
- Stone Bruises 4.4%
- Calf Muscle Pulls 3.6%
- Heel Bone Damage 3.0%
- Hip Ailments 2.6%
- Hamstring Pulls 2.6%
- Thigh Muscle Pulls 1.3%
- Leg Fractures 1.0%

**VITAMIN CURB**

The recent restrictions on vitamins by the Food and Drug Administration has brought a word of approval from the director of the University of Illinois Health Services. Under the new ruling, the FDA allows products containing 30 percent of the recommended daily allowance to be sold as food. Items from 50 to 100 percent of the daily allowance will be considered dietary supplements. Anything over 150 percent may be sold by prescription only.

Many medical people feel that vitamins have been “over sold”. An adult on an average diet needs little vitamin D. High concentrations of water soluble vitamins, such as B and C, go right through the body and are not stored.

Some feel greater restrictions are also needed for vitamin C. Large doses interfere with vitamin A production and can also be a factor in the production of kidney stones.

**COLLEGE TO SURVEY ATHLETIC INJURIES**

More children and teenagers suffer injuries through sports and recreation than any other cause, an estimated 630,000 injuries per year, yet little effort has been made to find out why or develop methods of prevention.

Recently the University of Washington has started a study sponsored by the Food and Drug Administration. This study will include injury problems in all major sports plus activities such as wrestling and skiing. Female athletics will be included. Spiked shoes, padding, and artificial surfaces involve equipment problems of interest.

**INCIDENCE OF NON-TRAUMATIC INJURIES TO RUNNERS**

Data were obtained on 109 cases of injuries to runners over a 17-year period from the files of an orthopedic clinic with a large practice in athletic medicine. The injuries were distributed among 11 categories and were tabulated according to the runner's preferred events, the treatments used, the duration of treatments, and the disposition of the case. The most common categories of injuries were strains (33%), fractures (20%), sprains (14%), and tenosynovitis (12%). The injuries were distributed by event as follows: sprint (24%), middle-distance (15%), distance (41%), joggers (3%). Information was insufficient to classify the remaining 17% of cases. Strains accounted for 18 of the 26 injuries to sprinters which was the highest incidence of injury by category and event. Distance runners had the highest incidence of injuries in 7 of the 11 categories. Treatments were predominantly conservative. Rest was prescribed in 78% of all cases, some form of physical therapy in 44%.
Dear Trainers:

Friendship, admiration, love. All misused, many times abused words—but all beautiful, particularly when sincere and truly meaningful.

My relationship with Al Hart embodied all of these words. His relationship with every trainer I’ve ever known was the same. I can’t remember any harsh word ever spoken of him for there were none.

He was the kind of man, and the kind of Athletic Trainer we would all want to be patterned after. Very few men of his quality and integrity come along in the lifetime of a profession. He molded better men and better trainers by example, not just words.

Words can’t describe how much we will miss him, but thank God he left us memories and examples of a wonderful man.

We are all better for having been blessed by his friendship, and the love we had for him.

Bobby Gunn
WHY were the saints, saints? Because they were cheerful when it was difficult to be cheerful, patient when it was difficult to be patient; and because they pushed on when they wanted to stand still, and kept silent when they wanted to talk, and were agreeable when they wanted to be disagreeable. That was all.

It was quite simple and always will be.
Please stand and observe a moment of silence in memory of the old padded helmet.
Announcing PAC-3.

The new, pro-proven Air Cushion* Padded Helmet tested by members of 15 out of the 26 pro teams during the 1973 season. From RIDDELL... who else?

If you're knowledgeable about helmets, you know why Riddell has refused to make the conventional padded helmet. So when we announce that we are going into the padded helmet market, your eyebrows probably will go up. But, please, don't confuse our new PAC-3 with the conventional padded helmet. The principle is completely different. And we never pussy-foot around. We tested the new PAC-3 during the 1973 pre-season... and continuing throughout the regular season with members of 15 out of the 26 pro teams. As a result there will be many old pros wearing our new helmet in 1974. Here's why:

Triple-Threat Protection.
This unique protection system consists of our Polycarbonate Alloy Shell and 32 or 33 individual vinyl air cushions (depending upon the shell size) encasing a layer of fitting foam and a second layer of energy absorbing foam. We call it "Triple Threat Protection" because it works like this:
1. A blow is struck. The initial impact is dispersed by the shell to the air cushion. The air cushion compresses, expelling air through a single vent, reducing the impact.
2. If the blow is substantial enough, the fitting foam compresses to further reduce the impact.
3. If the blow is severe and the fitting foam compresses completely, then the energy absorbing foam comes into action.

Perfect professional fit and comfort.
The same Air Cushion principle that gives the PAC-3 its extraordinary protection also provides a perfect fit. As the helmet is placed on the head, the pressure exerted automatically expels just the right amount of air from the cushion and the fitting foam adjusts to the exact shape of the wearer's head. The combination of the air and fitting foam gives unbelievable comfort.

Want to know more?
Just write us for a free sample of our patented air cushion.

Whose helmets are worn by more pros than all others combined?

RIDDELL: WHO ELSE?
Riddell, Inc., 1151 W. Roscoe, Chicago, IL 60657
*Patent Applied For
ROD COMPTON
In January 1973, Rod Compton was appointed Editor-in-Chief of Athletic Training and Journal Committee Chairman, with his first official issue coming out in March 1973. He is responsible for the entire design and content of the Journal, coordinating the various sections of the Journal, designing and choosing layout, and overseeing the printing of our publication. Rod earned his BS in Health and Physical Education from Ohio University in 1969 and received his MEd. from Bowling Green State University a year later. He then moved south to take over his present position as Head Athletic Trainer at East Carolina University. Upon accepting the Journal position he expanded the Committee from a seven man group to the present staff of ten.

ED CHRISTMAN
Ed Christman is the newest member of the committee taking over the “Current Literature” section as of this issue. Ed earned his BEd. in Health and Physical Education from Ohio University in 1969. In 1972, Ed received his MSed in Physical Education from Miami (Ohio) University while serving as Assistant Trainer. In that same year Ed and his wife, Pat moved to Williamsburg, Virginia for his present position as Head Trainer at the College of William & Mary.

TOM CARTER
The “Abstracts” section of the Journal is the responsibility of Tom Carter. Tom organizes and coordinates a subcommittee of abstracters for his section. He received his BSed. in Education from Central Michigan University in 1967 and served as Head Trainer for Flint Northeastern High School immediately after graduation. Then, in 1969, Tom moved to his present position as Assistant Trainer at the University of Wisconsin at Madison.

RAY BAGGETT
Ray Baggett handles the new section “Student Trainer’s Corner” for the Journal. Ray is in his seventh year as Assistant Trainer at Indiana State University. The student trainers in I.S.U.’s N.A.T.A. approved curriculum provide a great resource for his section. He received his B.S. in Physical Education in 1957 from Troy State University and earned his M.S. in Health and Safety from Indiana University a year later. Ray and his wife, Shanda, have a daughter, Sharae.

DENNIS ATEN
"Potpourri" is the brainstorm of Dennis Aten, the Trainer-Therapist at Eastern Illinois University. Dennis received his B.S. from the University of Nebraska, his M.S. from Eastern Illinois University and his Physical Therapy Certificate from the Hermann school of Physical Therapy in Houston, Texas. He is married to the former NaDean Haase and has three children: Keith, 14; Kevin, 12; and Lori, 3.
GREETINGS

HOLLY WILSON

Holly Wilson keeps us abreast of the women's point of view of the profession with her "Not For Men Only" section. Holly is an instructor and athletic trainer for the Women's Physical Education Department at Indiana State University. Holly received both her BS (1969) and MS (1970) degrees from ISU.

KEN MURRAY

The bookworm of the staff is Ken Murray, who handles the “Book Reviews” portion of the Journal. Ken received an AA degree from Schreiner Junior College in 1965. Three years later he graduated from the University of Texas with a BS in Health and Physical Education. Ken also earned his MA from East Tennessee University in 1969. He is now in his fifth year at EKU and working on his doctorate.

JEFF FAIR

Jeff Fair keeps us up to date with “The Calendar of Coming Events.” Jeff is a 1971 graduate of Kent State University, also getting trained in Corrective Therapy at the Cleveland Veteran's Administration Hospital. He continued his education at the University of North Dakota where he was Assistant Trainer. In 1972, Jeff became the Head Football Trainer at Oklahoma State University.

MRS. HARRIETT FRANKLIN

In addition to many other duties in the N.A.T.A. office, Harriett Franklin handles the advertising details for Athletic Training. Upon taking her position five years ago, the job required only one or two hours daily. At the present time, she works on N.A.T.A. projects eight hours a day with additional help due to the expansion of our organization. She is in such constant contact with trainers across the country that she feels she knows each of them and thinks "they are great people."

CLINT THOMPSON

As editor of Athletic Training, Clint Thompson heads up a nine-man Editorial Board that reviews and clears all articles presented for publication. Clint received his BS in Physical Education from The University of Texas in 1963 and his MA in Physical Education from Michigan State University in 1969. Clint served as Assistant Trainer at Michigan State University from 1964 to 1970. He then moved west to take the head position at Colorado State University. He returned to Michigan State University in 1973 to take over the Head Athletic Trainer position. Clint and his Editorial Board have done an excellent job of streamlining the screening process for our journal.
The prevailing opinion as to the causation of muscle soreness is based mainly on the work of Hough (21). Two general types of muscle soreness resulting from muscular efforts are described (8, 258, 21). 1) pain during and immediately after exercise, which may be persistent for several hours, and 2) local pain that develops several hours later.

The first type of pain, as described above, is probably due to the effects of metabolic end products on the pain endings (8:258, 21). This type of pain is usually of short duration and is relieved by rest.

The second type of pain, as described above, which is generally the type of muscular pain reported to the athletic trainer, can become persistent. Three different hypotheses for the cause of this type of pain exist. Hough’s hypothesis (21) concerning pain resulting from “torn muscles and/or connective tissues” is generally accepted today (5:124, 28:55, 34:55). Karpovich (23:28) offers an hypothesis which explains pain causation by two different factors: 1) a rise in osmotic pressure inside and outside the muscle fibers causing edema, and 2) irradiation of pain endings by the metabolites. A third hypothesis offered by de Vries (8:258) concerns the development of a painful localized spasm resulting from the noxious stimulation of the muscle by ischemia occurring during muscular effort.

The theory of causation of muscle distress offered by Hough, although generally accepted today, has not been substantiated by research directed at demonstrating the existence of torn fibers in relation to this type of soreness (8:258, 23:28). The explanation of soreness offered by Karpovich involving edema formation and noxious stimulation from the metabolites would not explain the cases of soreness that are persistent. With rest, it seems that these causative factors would be dissipated and therefore such soreness would be reduced. The hypothesis offered by de Vries (8:259) (which this author has entitled the Myotonic Theory) has a logical physiological rationale to explain muscular distress.

The physiological rationale for the myotonic theory involves production of noxious stimulation within the muscle as a result of exercise, a condition which brings about an enduring, painful reflex skeletal muscle contraction. It has been indicated that exercise above a minimal level causes a degree of ischemia within the active muscle (9,32). Ischemia can produce pain within a muscle possibly by transfer of “P” substance (26) to the pain nerve endings. Noxious stimulation can bring about a number of reflex responses (4, 19, 37), among which skeletal muscle spasm is included. The spasm produced becomes painful and thereby self-sustaining (4:17, 19:249, 37:29).

Pain is influenced by the central nervous system phenomenon of pain reaction (4, 19, 37), which involves referred pain, hyperalgesia, and individual variations concerning differences in hereditary endowment, cultural orientation to pain, social interaction, and past encounters with painful stimuli (4:13). Such factors must be considered within the myotonic theory of muscle distress.

The reflex tonic response to ischemic pain would not explain the delayed nature of this type of muscle distress. It seems that the tonic response would be produced when the painful ischemia was developed within the muscle, not several hours later as commonly described for this type.
of muscle distress. It is possible that the tonic response is delayed by a process of dissociation of pain response to noxious stimulation (4:23). Possibility the initial noxious stimulation is produced by means of a delayed physiological response as described by Karpovich. (23:28).

**CAUSATIVE FACTORS OF MUSCLE INJURY**

The myotonic theory allows integration of related causative factors of muscle injury. It has been indicated that individuals possessing significant strength differences between the quadriceps and hamstrings are more susceptible to hamstring strains (3). It is feasible that the strength difference allows the fatiguing of the hamstring group to a point whereby a painful tonic response results. The exposure to cold drafts after exercising has been related to muscular distress (2:101, 224, 623). It is possible that the noxious stimulation within the muscle produces an hyperalgesic state. With a hyperalgesic condition, normally non-noxious stimuli can become noxious and produce pain reactions (18, 19:173, 37:17). The cold draft, normally non-noxious, thereby becomes noxious and produces the pain reaction of muscle spasm. Reflexes of the central nervous system can be influenced by adaptation (32:10). Therefore, the process of warming-up could be considered as providing a gradual adaptation to the noxious stimulation which will be encountered along with the forthcoming muscular activity. Such adaptation might aid in the prevention of the reflex condition of muscular spasms.

**MYOTONIC THERAPY**

The myotonic theory of muscle distress has an advantage for athletic trainers in that it lends itself to specific therapeutic procedures. A static stretching for the prevention and treatment of muscular distress has been suggested (6, 7, 8:258). Such static stretching has been related to a lowering of electromyographic levels and pain levels in exercised muscles (6, 7, 8:258). An explanation concerning an inverse myotatic reflex involving the Golgi tendon organs (8:259) has been offered to explain the results of static stretching.

All muscular distress is probably not of tonic origin. A muscle placed under great and sudden stress could exceed its elastic limits and rupture may occur. Such an injury would not respond to static stretching therapy (8:265).

The author has, over a period of two years, pragmatically developed specific therapeutic techniques for the control of myotonic muscle distress. The techniques involve a synthesis of de Vries's static stretching and cryotherapy. Cryotherapy enhances treatment because of the effect of the ice on pain (11, 12, 13, 16, 29, 35) and the effect of ice on the fusimotor neurons of the muscle spindle (16, 17, 29, 35) which govern the tonic response of the skeletal muscles (14, 15, 25, 30).

The therapeutic techniques involve the determination of the history of the injury. Has the athlete sustained a prior injury? Has he had recurring problems? What activity has been engaged in? New exercises or activities tend to increase the possibility of myotonic distress. What was the relation of onset of pain to activity? If the pain developed during a specific movement (especially if of a violent nature), then the possibility of muscle tissue disruption exists, a type of injury that is considered traumatic. If the onset of pain occurred during non-vigorous activity, then the possibility of tissue disruption is decreased. Therefore, this type of injury is most likely of myotonic origin.

If the injury is traumatic, a traditional treatment procedure of cold, compression, and elevation (2:622, 5:124, 20:71, 27:152, 28:114) is started and maintained for 24-36 hours to reduce the possibility of further tissue disruption. After this period, myotonic treatment (to be described below) is initiated to decrease the tonic condition of the injured muscle. If edema or hematoma is present, prudent hyperthermal treatment is employed.

**MYOTONIC TREATMENT**

If the injury is myotonic, the description of the pain, restriction of range of motion and palpation will help isolate the specifically involved muscle. If the injury is mild, the pain will be generalized within the involved muscle group and normal range of motion will be limited by less than approximately five to ten degrees. The technique for mild injuries involves the use of painless, static stretching. After determination of the involved muscle, select a position which will place the origin and insertion of the muscle at the greatest distance apart with the least effort on the part of the athlete. The athlete assumes the stretching position, stretching the involved muscle as far as the onset of pain will allow. The stretch is statically controlled. The athlete will need to be reminded not to use ballistic movements. The stretching position is maintained for three one-minute periods with a 20 second rest between. Although de Vries used two two-minute periods with a one-minute rest, this author has determined that the longer periods generally become uncomfortable for the athletes to maintain. Analgesic balm, a mild pain reliever (33), is used to assist relaxation. Also an ace bandage is used, placed as firmly as painless tension will allow. The athlete is instructed to stretch before and after each practice session. Instruction is also provided concerning proper conditioning (i.e., the gradual adaptation of the body to the noxious stimulation of muscular activity). Whereas the myotonic response generally takes place several hours after muscular activity, the severity of the activity is controlled in the following prescribed manner. The degree of severity of muscular activity for each work-out is determined by noting the length, rate, repetition and rest of the specific muscular activity engaged in. The amount of tonic distress resulting from that
activity is noted the next morning. If the distress is low, the severity of the next work-out is slightly increased. If the distress is high, the severity of physical activity is maintained or reduced.

If the injury is major, the pain will be localized within a specific portion of the involved muscle and the restriction of range of motion will be greater than approximately five to ten degrees. Treatment consists of an ice massage and static stretching. An ice pack is applied to the involved area for a period of ten minutes, preceding ice massage. While verbally describing the sensations the ice will produce for the athlete, i.e., intense cold, burning, followed by aching and then numbness (16), the trainer applies the ice directly to the skin by slow circular motions. When the loss of sensation is achieved, the athlete is instructed to stretch as described for mild injuries. Three periods of three one-minute stretching will be separated by five minutes of ice massage. A three-day reconditioning period is then prescribed for the athlete. Start with very light activity and increase as proper conditioning (noted above) allows. The author has observed that the pain and restriction of range of motion are generally relieved immediately, but if the reconditioning period is not adhered to carefully, the injury will easily recur.

A CASE HISTORY

The following case report of the effect of cryotherapy on muscular injuries epitomizes the results which the author has observed over a two year period and has convinced him of the myotonic nature of muscle injuries. An athlete, C.H., reported to the training room during the later part of practice early in the soccer season. C.H. complained of severe pain of the anterior portion of the right thigh. Locomotion was painful. A palpable hard raised mass approximately three inches in length and two inches in width was present on the anterior portion of the thigh midway between the knee and hip. C.H. reported that the team had been participating in a kicking drill which required the players to kick the ball the width of the field for the first time of the season. Onset of pain took place while standing, not during the act of kicking. Because of the non-traumatic nature of the injury, cryotherapy was utilized. At the end of the third period of stretching, range of motion was approximately normal and the pain was greatly reduced. The palpable raised mass was absent. As C.H. sat at the end of the treatment table after therapy, the palpable mass returned by means of a clonic response that lasted 10 to 15 seconds. The return was accompanied by loss of range of motion and increase of pain to approximately pre-treatment levels. After a one hour period of gentle walking and sitting, another cryotherapy treatment restored range of motion and reduced pain level. C.H.’s thigh was firmly wrapped with an ace bandage and he was instructed to stretch before retiring for the night. On reporting to the training room the following day, pain was reported as minimal and range of motion was normal. C.H. was instructed in specific reconditioning techniques and informed that he should stretch before and after practice for a few weeks. C.H. had no further involvement with the injury for the remainder of the season. The raised, palpable mass described above would have, under traditional injury theory, resulted from disrupted muscle tissue (5:124, 27:151, 34:78). The clonic response of the mass indicated a neuromuscular involvement rather than disrupted muscle tissue.

MYOTONIC DISTRESS RESULTING FROM NON-MUSCULAR SOURCES

The author’s opinion is that a majority of the injuries that a trainer handles are of myotonic origin. The myotonic pain could be initiated by the noxious stimulation of muscular activity or possibly by means of a referred pain process (19, 37). The myotonic response could be initiated by other noxious stimulation such as soft tissue injuries, bursitis, tendonitis, etc. With referred pain, successful treatment includes not only relieving the skeletal muscle spasm, which is an additional source of noxious stimulation, but also relieving the original source of noxious stimulation (19:313, 37:28). Whereas fatigue sensations have been attributed to sources other than skeletal muscle (1:136), the possibility exists that stressed ligamentous tissues could result in a myotonic reaction.

EFFECTIVENESS OF ICE THERAPY

The dramatic effect of ice therapy reported by athletic trainers in the last few years possibly should be explained not only by circulatory changes (10), but also by the effect of ice on pain and the fusimotor nervous system. Thus the viewpoint that soft tissue injuries might be accompanied by myotonic pain which outlasts the original source of noxious stimulation of soft tissue damage is a plausible one and would explain the dramatic effect of ice therapy on soft tissue injuries.

IMPLICATIONS

Research must be directed to a further evaluation of the myotonic theory of muscular distress and of pursuing more effective means of preventing and/or treating muscular distress. If the effectiveness of ice in cryotherapy treatment is pain reduction, then more effective application might be obtained by cycles of 5 seconds of application and 10 seconds of non-application (12).

The author is cognizant of the fact that many of the theories presented are speculative, but in view of neuromuscular physiology (14, 15, 25, 30, 36) and the responses of the human body to pain (4, 19, 22, 24, 37), the myotonic theory of muscular distress is plausible. Consideration of the effectiveness of cryotherapy and static stretching on muscular distress renders probable the myotonic theory of muscular distress.
In making a fiberglass heel cup, the procedure is essentially the same, except that the male mold is made with molding plaster.

1. Draw an outline of the proposed heel cup on the athlete's heel approximately 3 inches long and 1½ inches in depth with a skin marking pencil or rod extending down into the can. In the construction of other appliances, poorest cup as previously described, apply a roll of fast drying plaster of Paris to the entire heel after first applying a thin coating of petroleum jelly for easy removal. Smooth out with a rubbing action while applying the plaster. Overlap material and occasionally change the direction of application covering the entire heel surface. Drying time is approximately 15-20 minutes.

2. Apply a roll of fast drying plaster of Paris to the entire heel after first applying a thin coating of petroleum jelly for easy removal. Smooth out with a rubbing action while applying the plaster. Overlap material and occasionally change the direction of application covering the entire heel surface. Drying time is approximately 15-20 minutes.

3. Remove the cast from the heel and coat the inner surface with silicone and cut for proper molding to model. Pour mixture of molding plastic into this plaster case and insert tube or rod into center for ease in handling after drying. The heel cup is built on this model. Draw an outline of the proposed heel cup on this model.

4. Coat the model of the heel with silicone and pour mixture of molding plastic into this plaster case and insert tube or rod into center for ease in handling after drying. The heel cup is built on this model. Draw an outline of the proposed heel cup on this model.

5. Cut four pieces of the fiberglass cloth each approximately 9 inches square and cut for proper molding to model.

6. Mix liquid Ortho-Bond resins in disposable cup as previously described in the construction of other appliances. Apply to model and to layers of fiberglass cloth to be applied. Wear rubber gloves.

7. Apply impregnated pieces of cloth, one at a time, to the model, rubbing carefully to eliminate air bubbles, and mold to surface of model while over-lapping section. Overlap section of each piece where the cuts were made to facilitate application.

8. Allow the appliance to dry overnight. Remove from the model while prying gently with a screwdriver or suitable tool. Wash inner surface.

9. Trim to desired size and sand to desired thickness. Smooth edges for comfort, particularly the leading edge portion of the cup which will contact the bottom of the foot. A fixed power sander facilitates this work considerably.

Summary

Contusions often occur in body contact sports which are not afforded complete and adequate protection by commercially available pads. Procedures for the construction of individually fitted fiberglass protective pads and the heel cup are presented. The author suggests that these custom-made pads will allow injuries to heal in a minimum of time and will allow the athlete to continue playing or return to play with the approval of the physician concerned before complete healing has taken place.

Boils (cont. from p. 154) packs to "localize" the lesion, a procedure that has been of questionable usefulness since antibiotics became available.

Insert figure captions here.
The first session of the Board of Directors Meeting was called to order at 6:00 p.m., June 8, 1973, by President Bobby Gunn. The following were in attendance:

District 1 Frank George
District 2 Francis J. Sheridan
District 3 Joe Gieck
District 4 Roland "Duke" LaRue
District 5 Byron Bird
District 6 Eddie Lane
District 7 Warren Lee, representing Rod Kimball
District 8 Lewis Crowl
District 9 Warren Morris
District 10 Sayers "Bud" Miller
President Bobby Gunn
Executive Director Otho Davis
Parliamentarian Bruce Melin

I. The Meeting was opened with a prayer by Mr. Gunn.

II. The treasurers report was presented to the Board of Directors.

III. There was discussion on the Professional liability - malpractice insurance program as presented by Poe and Associates of Tampa, Florida. The coverage was for $25,000.00 for each occurrence and $75,000.00 annual aggregate, subject to a $500.00 deductible to include claim expense and mandatory for all eligible members of the Association for an annual premium of $25.00. A motion was made by Mr. George and seconded by Mr. Sheridan to reject this proposal. Action: Proposal was rejected.

IV. The Audio-Visual Committee report was discussed. The budget request was tabled until the Tuesday meeting.

V. The Certification Committee report and request was discussed and tabled until Tuesday.

VI. The Grants and Scholarship Committee report and request was discussed and tabled until Tuesday.

VII. The Honor Awards Committee report and request was discussed. The nominating committee to the Helms Hall of Fame requested a directive from the Board of Directors as to a unanimous vote from the nominating committee for future selections into the Hall of Fame. A motion was made by Mr. Sheridan and seconded by Mr. Morris to deny the request. Action: Approved; Request denied.

VIII. The Journal Committee report was discussed and tabled until Tuesday.

IX. The National Convention Committee report was tabled until Saturday.

X. The Placement Committee report was discussed. It was requested to Chairman A.G. Edwards that... "The Committee will include one chairman and ten (10) committee members, one from each district, appointed by the Board of Directors from the certified membership of the Association. The Chairman and the committee members will be appointed for a two (2) year term of office and may be reappointed by the board."

A motion was made by Mr. George and seconded by Mr. Bird to accept the report and request.

Action: Approved.

XI. The Placement Committee budget request for $690.00 was discussed. A motion was made by Mr. George and seconded by Mr. Miller to approve the budget request by the Placement Committee for $690.00

Action: Approved.

XII. The Public Relations Committee report and budget request was discussed. A motion was made by Mr. Crowl and seconded by Mr. Gieck to accept the report and approve the 1973-74 fiscal year budget request of $150.00 for film purchases and a contingency fund of $300.00.

Action: Approved.

XIII. The Recruitment Committee's report and budget request was presented and discussed. A motion was made by Mr. Crowl and seconded by Mr. Miller to approve the report and budget request of $1,126.18.

Action: Approved.

XIV. The Research and Injury Committee request was discussed. There was no action by this committee. A motion was made by Mr. LaRue and seconded by Mr. Morris to approve the $500.00 request by the Research and Injury Committee for the 1973-74 year.

Action: Approved.

XV. There was a request from District 4 for discussion on... "should the NATA include female trainers in Olympic and Pan-American Games nominees list?... (Not to be included in formula limitation per district)."

Following discussion on the above, a motion was made by Mr. Sheridan and seconded by Mr. Gieck that the names of female trainers be included in the
The Board of Directors recessed by 9:30 PM with instruction to reconvene at 9:00 AM on June 9, 1973.

XVI. Mr. Chris Patrick resigned from the American Association of Pediatrics...Dick Malacea

American Association of Health, Physical Education, and Recreation...Sayers "Bud" Miller

American College Health Association...James Dodson

American College of Sports Medicine...Gary Delforge

American Corrective Therapy Association...Frank George

Joint Commission on Competitive Safeguards and Medical Aspects of Sports...W. H. Bonnington, William E. Newsell, and Otho Davis, Executive Officer.

N.C.A.A. Rules Committee...Warren Morris

National Federation of State High School Athletic Association...Fred Hoover

National Operating Committee on Standards for Athletic Equipment...George Sullivan

N.C.A.A. Drug Education Committee...Al Hart

Olympic Committee...Charles "Chuck" Medlar

A motion was made by Mr. Sheridan and seconded by Mr. Miller to accept the appointments.

Action: Approved.

The Board of Directors recessed by 9:30 PM with instruction to reconvene at 9:00 AM on June 9, 1973.

XVII. Mr. Fred Hoover appeared before the Board of Directors and presented a report on the National Convention Committee. Preregistration for the Convention, used for the first time, was a success. Mr. Hoover was instructed to reappear before the Board on Tuesday for further discussion on future convention sites.

XVIII. Mr. Rod Compton, Journal Committee Chairman, appeared before the Board of Directors to discuss his report and budget request. A motion was made by Mr. Morris and seconded by Mr. Gieck to approve a budget request of $12,985.00 for the Journal Committee for the 1973-74 fiscal year.

Action: Approved.

XIX. Discussion was presented in reference to the Ad Hoc Committee on Accreditation. Dr. Robert Brashear, University of Tennessee, was a guest of the Board for this discussion. The Association will continue to gather as much data as possible in the area of accreditation with other allied organizations. President Gunn appointed an Ad Hoc Committee of implementation of Phil Donley, Frank George and Otho Davis to further proceed with the former committees recommendations.

Action: Approved.

XX. Discussion was presented in reference to the Membership Committee in relation to certification, "actively engaged" and continuing education. President Gunn appointed an Ad Hoc Committee of Bud Miller, Lindsey McLean, Fran Sheridan, and Joe Gieck to meet and make recommendations to the Board of Directors in reference to the above discussion.

A motion was made by Mr. Crowl and seconded by Mr. Morris to accept appointments to the Ad Hoc Committee and to report to the Board on Tuesday.

Action: Approved.

XXI. The Professional Education Committee report was presented by Chairman, Sayers "Bud" Miller.

XXII. The Professional Education Committee requested approval of the athletic training curriculums at the following schools: Appalachian State University, Central Michigan State University, Louisiana State University, Purdue University (Health Education), Indiana University, University of North Dakota, University of Oregon, and the University of Washington.

A motion was made by Mr. Sheridan and seconded by Mr. Lee to approve the above schools as recommended by the Professional Education Committee.

Action: Approved.

XXIII. The Professional Education Committee budget was discussed.

A motion was made by Mr. Gieck and seconded by Mr. Lane to accept the budget request of $5,000.00 for the Professional Education Committee.

Action: Approved.

XXIV. A request was made for an up-to-date listing of N.A.T.A. approved athletic training programs, clinics, workshops, etc. to be published in Athletic Training, Journal of the National Athletic Trainers Association.

A motion was made by Mr. George and seconded by Mr. Crowl to accept the above request.

Action: Approved.

XXV. The Professional Education Committee requested that Board approve the appointment of Mr. Kerker Kassabian as Chairman of the sub-committee on continuing education.

A motion was made by Mr. Sheridan and seconded by Mr. Bird to accept the above request.

Action: Approved.

XXVI. The Professional Education Committee requested the Board to review the athletic training undergraduate curriculum as follows:

A. The laboratory physical science requirement be changed from the required category to the category of highly recommended.

B. The requirement of students enrolled in athletic training curriculums will be highly recommended to major in either physical education or health and/or other secondary teaching fields instead of being required to major in either physical education or health. A motion was made by Mr. Crowl and seconded by Mr. Bird that the above recommendation be accepted.

Action: Approved.

XXVII. The Professional Education Committee recommended that a graduate or undergraduate student who has met all the academic and clinical experience requirements for NATA certification be allowed to take the certification examination upon proof of meeting such requirements without being required to meet a two-year student or active membership requirement of NATA.

It was also recommended that the two-year membership requirement be dropped from all procedures of certification.

Action on the above was tabled until Tuesday.

XXVIII. The Professional Education Committee presented changes to the guidelines for development of an approved graduate level program in athletic training.

Following discussion, a motion was made by Mr. Gieck and seconded by Mr. Lee to accept the changes.

Action: Approved.

XXIX. There was discussion on "The Athletic Care Act" (H.R. 7795 by Congressman Ronald Delums, California). Pro and con items were presented by various board members.

No formal action was taken by the Board of Directors on this subject.

The meeting was adjourned at 4:45 o'clock P.M.

XXX. The Business Meeting of the National Athletic Trainers' Association was convened at eleven o'clock A.M. on Monday, June 11, 1973, with President Gunn presiding, who opened the meeting with a prayer.

XXXI. A request was made by President Gunn to dispense with the
roll call. It was severally moved, seconded and unanimously carried that the roll call be dispensed with.

XXXII. The minutes of the 1972 business meeting and the minutes of the 1973 winter Board Meeting were published in *Athletic Training, Journal of the National Athletic Trainers' Association*. A request was made to approve the minutes without their being read. It was severally moved, seconded and unanimously carried that the minutes be approved without being read.

XXXIII. The Treasurer's Report was presented by Otho Davis, Executive Director. President Gunn requested for acceptance of the report, whereupon it was severally moved, seconded and unanimously carried that the Treasurer's report be approved unanimously carried that the report be approved.

XXXIV. The Executive Director presented the report covering the June 8 and 9, 1973 Board of Directors meeting as reviewed in sections I to XXXIII of this report.

XXXV. Memorial resolutions were presented for Tom Spalj, University of Iowa; Francis J. "Packey" Boyle, University of Idaho; and Steve Witkowski, Wesleyan University.

XXXVI. Mr. Laurence "Porky" Morgan presented the Twenty-five Year Award recipients. They are as follows: H.L. "Buck" Andel, Brady Greathouse, Leo J. Hammel, Kenny Howard, Hal F. Knowlton, Roger D. McGill, and Edward A. Salkowski.

XXXVII. Mr. George Sullivan presented the Honorary Award recipients. They are as follows: Dr. Fred Allman, Jr., Dr. Lamont Henry, Dr. M.A. Hubert, Dr. Americo Savastrano, Mr. Walter Swank, and Dr. Donald Slocum.

XXXVIII. Mr. Sullivan reported that there were no recipients for the United Helms Hall of Fame for 1973.

XXXIX. Executive Director Davis presented the NATA award to Mr. Jerry Rhea, Mr. Pat Dyer, Mr. Joe O'Toole and Mr. Warren Morris for their work as the National Convention Committee.

XL. The members of the 1973-74 Board of Directors were presented to the membership.

XLI. Mr. Mike Duberstein, Administrative Assistant to Congressman Ronald Dellums of California, appeared before the membership to discuss the "Athletic Care Act".

Mr. Mike Duberstein: "Last August, after Congressman Dellums introduced the "Athletic Safety Act", which is a separate piece of legislation developed after eight months of work and which amends the Occupational Safety Act, I was contacted by Otho Davis, who then explained to me about the problem of athletic trainers throughout the country. From last August 1972, until late in May, Bobby Gunn, Otho and myself, as well as other members of NATA and your Board of Directors, have been working to develop this piece of legislation. Congressman Dellums has introduced the "Athletic Care Act" legislation and we are now waiting for further support before we start to make a move on it. Now, while I realize that virtually everyone here has received a copy of the bill, I am not at all sure that everyone is completely familiar with it. Therefore, I would like to take just a minute or two in which to summarize what this piece of legislation does.

In essence the legislation ("Athletic Care Act") amends the two existing pieces of federal aid to education legislation—that is, the elementary and Secondary Education Act of 1965, and the Higher Education Act. The amendment provides that within an eight-year period, which can be changed), all schools which are engaged in interscholastic athletic competition must employ a certified athletic trainer. The sanction for this is that any school which does not comply will not be allowed to compete with other schools. The effect of sanction, in addition, is a loss of other federal monies for schools which do not comply.

The development of the plan as to which schools employ trainers over which period is left up to the Office of Education and the Commissioner of Education. Finally, the amendment contains a section which would provide assistance to schools for training programs to provide an increased number of athletic trainers. At the same time, there is an open authorization of funds to carry it out.

That is the Athletic Care Act. As to where we are now, the bill has been introduced but no bill which is introduced into Congress passes automatically. So far this year there are more than eight thousand pieces of legislation before Congress. They deal with all phases of education, welfare, foreign affairs and other matters. The various committees which the bills are assigned to have to make some priority judgments.

The way to get legislation through is by broad, mass support for it. This legislation will not pass if it is sponsored by only one Congressman and one delegate, nor will it pass it only a few people show the need for it. What is needed is broad Congressional support—that is, sponsorship of this legislation by a large number of members of Congress and members of the Senate and also an outpouring of support from the country as to the need for the legislation.

Now, I am sure I do not have to tell you as to why we need this type of legislation. Suffice it to say that in the work that I have been doing in the last two years, it is apparent to me there is a great need for greater safety in sports and it is evident that without some sort of federal intervention it is going to come about, like it or not.

Therefore, we have proposed the legislation and we need to go on from here.

Now, if it be the feeling of NATA that the legislation be changed, there is nothing that Congressman Dellums has ever done which is written in concrete. We are willing to change and make modifications.

Now, I know there is opposition among NATA members to a part of this legislation. I have received a copy of the letter which Mr. Gordon Graham is in opposition to this legislation. I would like for Mr. Graham to present his opinions to the membership."

As for the final point, if the eight-year period is unworkable, as I said earlier, we are not carved in stone—we are willing to change. If it is a ten-year period, a twelve-year period or
IN MEMORIAM

STEVE WITKOWSKI

On January 28, 1972, over four hundred people gathered in McConaughy Hall to honor Steve Witkowski, Head Trainer at Wesleyan University in recognition of his forty years of service to the University and the Community.

Administrators, faculty, students, alumni, municipal officials, and friends expressed their appreciation for Steve's concern for his fellow man. His devotion to his family, friends, profession and the University was exemplary.

Two-time Olympic Trainer and National Duck Pin Bowling Champion, he was a man who grew with and for his profession. Steve's life was one which exemplified the "American Dream". Through the required physical program and intercollegiate athletics, Steve came into contact with more students than probably any man ever did or will at Wesleyan.

The long line of visitors on homecoming and reunion weekends testified to the affection that alumni had for him.

At the dinner, Steve was presented two volumes of letters from his Wesleyan friends. These letters were a great tribute to the institution that gave Steve his opportunity, the program that allowed him to practice his profession, and to a great man.

Wesleyan has been and always will be a better place because of Steve Witkowski.

FRANCIS J. "PACKEY" BOYLE

One of the most beloved of University of Idaho athletic staff members, Francis J. (Packey) Boyle, died August 16, 1972, in Kingman, Arizona.

The retired UI athletic trainer had suffered from a heart ailment for several years. Boyle served the university from 1954 to 1968, coming to Moscow from a similar position with the University of Arizona.

He was loved and appreciated by players, coaching staff, administration for his extreme devotion to duty. He was known as the "father-confessor" to his athletes, of which he always had a kind word. Packey will leave a mark on Idaho athletics for years to come. We will miss him; however, we will be forever remembering his jovial smile, the pat on the back to the athletes and his undying pride in the University of Idaho.

He won many honors in his profession, the most notable being named trainer for the winter Olympic games at Squaw Valley, Calif., in 1960.

Boyle, who held a degree from the Palmer School of Chiropractic, was born August 5, 1903, in Spring Valley, Ill. He attended schools in Peru, Ill., and also had three years' training at the Davenport School of Osteopathy. He was a Marine Corps veteran of World War I, a member of the American Legion, Moscow Elks Lodge, and the National Athletic Trainers Association.

He was a practicing doctor of chiropractic in Nebraska from 1927 to 1935, was with the National Scouts of America in 1933 and was in charge of the physiotherapy department at Sun Valley from 1936 to 1955, where he supervised the training of Olympic ski team members. He was also the athletic trainer at Hailey High School for ten years.

TOM SPALJ

The inevitable conclusion to all our lives comes hopefully only after a full, wholesome, and lengthy life. When life is concluded prematurely, death is considered cruel and more tragic.

At age 31, Tom Spalj was taken from amongst us, his family, friends, athletes, and fellow trainers all felt a deep loss.

To mourn his death would violate the very philosophy and character he so amply displayed in lived. We who knew him realize he lived life fully as a husband, father, and professionally. His smile and warmth will never be erased or silenced, but will remain with all of us who knew Tom Spalj.
whatever period, I think it can be changed. The eight-year period was chosen after extensive discussion and consultation with members of the NATA, who felt that over that period of time it could be accomplished.

A final point is that there are no specific sums listed in this legislation because there is no way of figuring how much it would cost. That would be the role of the Office of Education. That is the way it is done by the legislative technicians, the House of Representatives, and the like in connection with all such legislation.

Finally, no one can assure anyone that once the act is enacted that there will be funds spent for the legislation. However, that means you have to fight all the harder.”

DR. KENNETH CLARK: “In supplying these trainers, I understand that similar acts have been passed with regard to state legislation in Texas. Are you having any problems supplying certified trainers to high schools in Texas?

PRESIDENT GUNN: “Of course we are having problems as any other state would have. Our bill or law that you are referring to is a licensing law and is not comparable to the “Athletic Care Act” but, yes, we have problems. Incidentally, it would behoove any of you interested at all in the Texas law to discuss it with members of District 6 because they can certainly tell you it is not a perfect law and, to my knowledge, no perfect law has ever been written. That is why you have the opportunity for amendment and change. As you know, the Constitution of the United States is one of the finest documents that has ever been written but it has been amended time and time again as the need arose.

Also, as Mr. Duberstein indicated, this proposed legislation is not embedded in concrete because they certainly realize it is not a perfect document, but, at any rate, it is a start and, at this point, I would like to interject a few personal feelings into this, mainly because I have become personally involved.

I receive any authority that I have in NATA from the Board of Directors. The Board of Directors approved the amendment that is being made to the Athletic Care Act. By constitution, I am the spokesman for the Board and the National Athletic Trainers Association. Therefore, I receive my instructions from the Board just as you do. Now, nobody in their right mind will attempt to tell you that this document will solve our problems. It creates problems, but then we do not progress without problems. As Mr. Duberstein stated, if the time limitation period to training to this were inadequate, then it would be extended. As for the funding, nobody can guarantee that in relation to any piece of legislation.

As for federal control in relation to education, I remind you that this is an amendment to two acts which are federally controlled and which concern education in every school, every public school in the United States. We cannot ascertain what you as NATA members want unless you tell us. The governing board cannot know what your desires are unless you express them. When you have a point, when you have a question, when you have an opinion, base it on facts as best you can ascertain and then bring this valid and positive opinion to your Director in order to get it back to the Board and the NATA as a whole. If you believe in your association, let your opinions be heard by the men that can do something about them. These little discussions and caucuses, of course, are of some value, but I question their positive value as to our progress. Let your Directors know what you want and what you are willing to work for. If you are willing to sit on your hands and let the world come to you, then we will go backward instead of forward.

You have a profession that you can begin to be proud of, that some people have worked awfully hard to make something of. It really depends on you as trainers as to what you want, not on anything else.”

MR. DUBERSTEIN: “There is one final point I would like to make. The legislation does not specify which schools receive the mandate. When we originally worked on this we thought there would be no way that I as a legislative assistant or the members of the Board of NATA could write the regulations giving the different options for different school systems. That is why the job is left entirely to the Office of Education. I don’t think it would be feasible in this bill as such to try and write the timetable, especially in relation to the different manners in which different school systems operate.

As to the other points made, these are exactly what we have previously been talking about.”

MR. JIM GOOSTREE, UNIVERSITY OF ALABAMA: I think every one of us is interested in the projected future of athletic training. With regard to this legislation, I think we have some one-third of our membership at this convention and in this hall at this time, not more than one. Therefore, I think poor judgment would be made if this group were to make it for us. Now, also, this involves a priority and, in my opinion, one of the greatest things that has ever been given to this group. However, I think also that we have been improperly informed and until a decision can be made to back this legislation that we need on a formal basis, and until we get good information to make this judgement, I don’t think we should proceed.

I would move we take all of this back to our District Meetings today for further discussion.

MR. GORDON GRAHAM, MANKATO STATE COLLEGE: “I have opposition to the Athletic Care Act primarily on several points.

May I first say that I agree that the athletic injuries are a problem. They are a serious problem at the high school level, as they are on the college level. We have a lot of colleges that do not have athletic trainers. Emergency medical facilities and personnel are now primarily available at the high school level. This we have to work to correct. With regard to the bill, there have been some small studies on injury data and I think there is insufficient research in all sports in relation to the frequency of athletic injuries. I think we know there are injuries occurring. I think we should know.

Another thing is the present financial difficulty at the secondary school level. I know in my state we have had about seven hundred teachers out of jobs this year who were employed last year because of drops in enrollments. This likewise means a drop in programs.

With regard to the grant provided for funds, there is no guarantee in the bill. Also, there is no guarantee that we can produce enough certified athletic trainers in an eight-year period to take up the fifteen thousand vacancies that are contemplated being there.

I also received a letter from a Congressman indicating that the proposal had been referred to the House Committee on Education and Labor, where it is pending with no action scheduled. The committee staff informs me that it is unlikely that an amendment of this sort
The Student Trainers’ Corner

One of the more frequent complaints expressed by student trainers who attended past national athletic trainers conventions, was that there was not enough of the program, especially lectures and taping demonstrations, geared to the level of the student trainer. I discussed this problem with Mr. Willard C. “Bud” Tice, Program Chairman of the 1974 National Athletic Trainers Convention. He is aware of the need to involve the student trainer in our national convention.

In this issue of the Student Trainer Corner is a letter written by Mr. Tice to enlighten the student trainer of possibilities of professional growth at the 25th National Convention. Also included is a comment by a graduate student at Indiana State University about Congressman Ronald V. Dellums’ Bill, “The Athletic Safety Act of 1973.”

Dear Ray,

As you know, 1974 marks the 25th Anniversary of the National Athletic Trainers Association. Right now we are in the process of finalizing our program for the Kansas City, Missouri convention. Our committee feels that this years convention will top all previous conventions as far as attendance records are concerned and because of this we are attempting to construct a program that will have an educational value to all in attendance.

Past convention committees have established excellent programs, but our committee felt a very important element of the N.A.T.A. was being somewhat neglected and that was our student members. After talking it over, it was decided that this year we would run concurrent sessions in an attempt to offer more sessions geared to the student trainers understanding. It is our purpose to offer many practical aspects of athletic training with sessions devoted to those areas in which students often have trouble. Taping is a problem to the young trainer as well as it is to the professional trainer so we will have different stations that will be staffed with many professional trainers from colleges and universities all across the country who will be demonstrating taping techniques for all parts of the body. Altogether we expect to have six separate stations and twenty certified trainers demonstrating and teaching the various methods to those in attendance. It will also be possible for a member to do some taping under the guidance of the certified trainer.

There will also be short presentations concerning each area that will be covered in the practical sessions. These areas will be ankle injuries, knee injuries, shin splints, elbow and wrist injuries, shoulder problems, muscle problems, and internal injuries in respect to sign, symptoms, treatment, re-conditioning, and prevention. Also, the topic of athletic conditioning, cryotherapy, heat stroke, heat exhaustion, and internal injuries will be covered. Phil Donley will inform the student membership as to scholarships available and educational opportunities at the college level. Although these sessions will be geared to the student trainers our committee feels that many of our professional members will want to sit in on some of these sessions to refresh themselves or maybe just pick up a new method. Right now I feel that our program is staffed with many excellent trainers who have volunteered to assist the student trainer in learning more about the profession of which he is already a valuable member.

It is also our intention to provide additional activities for the students, and I would welcome any suggestions on ways that we can make our convention more meaningful to our membership.

Looking forward to Kansas City in June and to seeing a large turnout to what should be a great kickoff for our next 25 years.

Sincerely,

W.C. “Bud” Tice
Athletic Trainer

Looking into Congressman Dellums’ Bill

What will Congressman Dellums’ bill do for our profession in the next few years? From the viewpoint of a graduate in physical education and an applied major in Athletic Training it could be helpful. All those in the profession realize what a boost this bill will provide to the growth and strength of athletics. More athletes will be cared for, injuries can be prevented and sound training and conditioning principles will be enforced on coaches. This bill will provide a sound basis for the continuance of athletics which is currently being attacked by the public.

This bill will reduce the overcrowding in the physical therapy schools and give the physical educators and health educators impetus to stay in their professions, professions which are presently overcrowded.

But overcrowded is what our profession will be by the passing of the Congressman’s bill. Are there any schools presently certified by the N.A.T.A. in a pos-

(Cont. on p. 182)
will be added to the Elementary and Secondary Education Act during this session of Congress. Another point is that the Elementary and Secondary Education Act was put in for an eight-year period in, I believe, 1965. Therefore, supposedly, as of July 1, 1973, unless Congress acts on it, there apparently will be no act after that time. Of course, if does have a one-year extension.

MR. DAVIS, EXECUTIVE DIRECTOR: “Before Mike answers these questions, let me say that there has been some discussion indicating that there are less schools, less competition, less everything. However, this is not so. The reports that I have received from the National Federation of State High Schools is that there are currently 3.8 million boys participating in high school athletics. The last report that they did was in 1971, some two years ago, and they have had an increase of nearly three percent of participating in the last two years and, therefore, on that basis, we cannot say there is a decrease.

Another point I would like to bring to you is that in connection with the 1973 report, also from the National Federation, there are 14,314 schools with eleven-man football teams. This does not include your eight, six or nine-man teams. The statistics we have received from the NATA members in respect to where you are employed, indicates that only one (1) percent of these 14,314 schools have a certified trainer and this, to me is a very tragic situation.”

MR. DUBERSTEIN: “At this point, let me consider some of the points that Mr. Graham has brought up. I think they are valid points and I think they should be brought before you. Let me sort of go backwards with it.

First of all, with regard to the question of the Elementary and Secondary Education Act (ESEA)—this Act is now in the midst of an intense review by the House Committee on Education and Labor. The Act has indeed received a one-year renewal. The point here is not unrealistic, because there is no one in this country that would expect it. However, the Nixon administration has proposed revenue sharing as an alternative to existing categorical aid programs—that is aid under the ESEA and Higher Education Act is under a series of categorical programs, such as Title I, Title II and other titles. Under each title are various programs, such as aid for disadvantaged children, aid for special education and the like. The Administration’s proposal would have all aid to education lumped together and sent out to state and local districts for revenue sharing. It will probably take another year or two years before this controversy is finished.

As it is at this point, the leadership of the House Education and Labor Committee will not accept revenue sharing for education. Therefore, for at least the next two to three years, you can expect revisions and extensions of the elementary and Secondary Education Act. The same does not apply, at this point, to the Higher Education Act, which was renewed last year.

Now, the utilization of the Elementary and Secondary Education Act and the Higher Education Act—this legislation was chosen simply because there are the existing vehicles for federal aid. Were there another way, we would have tried it. However, given the nature of what the NATA is about and what this legislation is about, we did choose the Elementary and Secondary Education Act.

As for further study. Anyone who has worked in Washington knows, and I guess anyone in any other bureaucracy knows the rule of government by committee and by study. For our part, we applaud the need for more study. However, we chose not to do so. This was the basis on which Congressman Dellums made that choice.

XLII. There being no new business to come to the floor for discussion, a motion was made and seconded to adjourn the meeting, whereupon at 12:20 o'clock P.M. the 1973 NATA Business Meeting adjourned.

The second session of the Board of Directors Meeting reconvened on Tuesday, June 12, 1973 and to order at 8:15 o’clock A.M. by President Bobby Gunn. The following were in attendance:

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<th>District</th>
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<tr>
<td>District 1</td>
<td>Frank George</td>
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<td>District 2</td>
<td>Francis J. Sheridan</td>
<td>District 3</td>
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<td>District 3</td>
<td>Craig Lewellyn</td>
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<td>Roland “Duke” LaRue</td>
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<td>Bryon Bird</td>
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<td>Eddie Lane</td>
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<td>Warren Lee, repre-</td>
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<td>District 8</td>
<td>Lewis Crowl</td>
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NATA Begins Its First Convention Course
XLVIII. Mr. Fred Hoover, National Convention Chairman, reappeared before the Board for discussion of future conventions. Mr. Hoover went on record for extending praise to the convention committee in Atlanta who did such an outstanding job in the total convention.

Mr. Hoover discussed the use of a press room at future conventions, something that is greatly needed. The public relations element for the National Convention would be separate from the NATA Public Relations Committee. The success of the first preregistration attempt by NATA was discussed.

XLIX. There were discussions on the 1978 convention site, Las Vegas, Nevada; Seattle, Washington; and Phoenix, Arizona were considered. A motion was made by Mr. Crowl to accept Las Vegas, Nevada as the 1978 convention site.

Action: Approved.

L. Cities under consideration for future convention sites as submitted by the Board of Directors, and which will be acted upon in June, 1974, are as follows:

1979: (Central) El Paso, Tex. by Dist. 6
New Orleans, La. by Dist. 9
Columbus, Ohio by Dist. 4

1980: (East) Miami, Fla. by Dist. 9
Philadelphia, Pa. by Dist. 2
Washington, D.C. by Dist. 3

1981: (Central) St. Louis, Mo. by Dist. 5
New Orleans, La. by Dist. 5
Houston, Tex. by Dist. 6

1982: (West) San Francisco, Calif. by Dist. 8
Seattle, Washington by Dist. 10
Phoenix, Ariz. by Dist. 7

1983: (Central) Dallas, Ft. Worth, Tex. by Dist. 6

LI. Mr. Bill Chambers appeared before the Board and discussed the progress of the 1975 convention in Anaheim, California. The convention theme will be "Family Time in Anaheim".

LII. In recognition of the tremendous effort and great job Fred Hoover is doing as National Convention Chairman a motion was made by Mr. Sheridan and seconded by Mr. Bird for a vote of confidence and appreciation for his contribution to the Association.

Action: Unanimous approval.

LIII. Mr. Davis reported to the Board that he had met with Mr. Bill Manning, Kendall-Bike Company, in reference to the Bike Award to be presented to the twenty-five year award recipients. Mr. Manning will explore the award with the Kendall Company and report to Mr. Davis their decision. This will be discussed again at the January, 1974, Board Meeting.

LIV. The Audio-Visual Committee budget request for $1,000.00 was discussed. A motion was made by Mr. LaRue and seconded by Mr. George to approve the Audio-Visual Committee budget request of $1,000.00 for use in library service.

LV. The names of Board members George, LaRue, and Crowl were placed in nomination for the office of Vice-President. The election was by written ballot.

Frank George was elected Vice-President.

LVI. There was discussion in reference to the requirements and Classification of eligibility for candidates for the office of President. A letter to all eligible candidates will be sent by the Executive Director informing them of such.

LVII. The report of the Ad Hoc Committee to Propose Revision of Relationships among the Areas of Membership, Certification, and Continuing Education was presented and discussed. The Committee agreed that the principle of participation in continuing education in a professional way is the key to evidence that a person is maintaining interest and competence in the profession of athletic training. In accordance with this principle, changes are proposed that relate to maintaining certification, eligibility for membership and evidence of participation in continuing education.

LVIII. Following discussion of the Ad Hoc Committee to Propose Revision of Relationships among the Areas of Membership, Certification and Continuing Education the following was recommended in reference to certification:

A person who is once certified as an athletic trainer (A.T.C.) remains certified as long as he or she meets the minimum requirements for continuing professional education, and only as long as such requirement is met.

Units of continuing education shall be defined and designated by the Professional Education Committee and approved by the Board of Directors. (For possible Board action in 1974.) Such units shall be related to a person's attendance and participation in: The NATA National Annual Convention, clinics, workshops, courses sponsored by medical organizations, college and university graduate courses relating to athletic training and/or sports medicine, and others.

The minimum number of units to be accumulated every three years shall be at least twice the number of units awarded for attendance at the NATA Annual Meeting. The Certified Athletic Trainer (A.T.C.) is responsible for sending to the NATA national office a verification of evidence of any continuing education units (C.E.U.) to be placed on his record.

A Certified Athletic Trainer

(Cont. on p. 180)

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Joanne Dolcemaschio is currently enrolled in the graduate athletic training curriculum at Indiana State University. When she wrote the following article she was an undergraduate student at Brooklyn College, working in the school's training program.

Although some of her statements are probably true, I have found that the greatest supporters of the entrance of women into the field of athletic training have been the men trainers. Most of the opposition today is centered in the women's physical education departments primarily because women coaches and physical educators do not fully understand the role of the athletic trainer. Over the past five years, a great deal of educating has taken place, but there is a long road ahead before athletic training for women will be completely accepted. This point is made in the second article by Dr. Eleanor St. John, Chairman of the Women's Physical Education Department at Indiana State. Dr. St. John was one of the first administrators to provide an athletic training program for women athletes.

An athletic trainer is the link between the athlete and the doctor. He cares for and prevents athletic injuries.

A trainer has always been sex-typed as a male occupation. Since he takes care of athletes, who are also sex-typed male, he too should be a male. How could a female take care of a male athlete? What if he gets a groin injury? A woman could never understand the masculine physical and psychological rigors of sports! She is too feminine!

Males, especially athletes, have little confidence in a woman's ability to be a trainer. They feel she is not intelligent or capable enough to be in the paramedical profession. She should be home cooking not on the field taping ankles. When a female works in the training room and a male athlete (even female for that matter) comes in for treatment, they look for someone else (preferably male) to help them.

Athletic training is a career which requires years of schooling and experience, constant reading and participation, and time for travel. Finally, friends and society as a whole put a lot of pressure on females preventing them from entering this profession. What kind of a career is this for a female? Females are too emotional for this job which requires a calmness and on the spot decisions! You won't have time to go to school, you should be getting married! You can't leave the kids to travel with the team! These are examples of how the professional and the sex-roles are not compatible.

Another problem women face in this profession is that there are few, if any, female trainers one can look up to for leadership and advice. For years it has been a male profession and this means it will take a long time for change to take place.

Women could be excellent trainers if given a fair chance. We can study just as hard and read just as much as a man can. We would be willing to put our time into school and travel if society wouldn't pressure us so much. We can be just as intelligent, calm and make on the spot decisions. There are no biological differences which make...
men more able to do this than women!

There is a lack of and need for female trainers. Women teams are on the rise and they will need trainers. Women athletes have shown their worth in the Olympics and they, too, will need trainers. Women trainers are just as capable as men to work with the male athletes. Men let female nurses take care of them in hospitals, why not a female trainer on the field!

Joanne Dolcemaschio

The expanding program of intercollegiate competition for women is necessitating many changes. As a veteran of the philosophy that “girls and women were not physiologically capable of strenuous competition,” I certainly never visualized that I would be making arrangements for our basketball team to fly to New York to participate in the National tournament; neither did I project that an athletic trainer would be a necessity!

The Women’s Department of Physical Education at Indiana State University added an athletic trainer to its program in 1968 when a woman student needed an opportunity to complete her practicum. With the help of the men’s program (they loaned us several pieces of equipment), modest facilities were developed and a schedule of the training room projected, and—the women had an athletic trainer at their service.

Utilization of the trainer is not an easy matter. We found that both coaches and players needed to explore the role of the service. All participants in the program now understand that the athletic trainer contributes to the efficiency of the athlete in the following ways:

1. Avoidance of injuries by preventive measures such as taping and conditioning.
2. Faster recovery from injuries because of rehabilitation-prescribed exercises and other measures such as the whirlpool, ultrasound, etc.
3. In-service training for the athlete who may well become a coach.
4. Greater security for the teams because of the policy that a trainer travels with all teams.

During the current year, Indiana State has 13 women, both undergraduate and graduate enrolled in the athletic training program. Projected employment of the trainers poses the traditional question concerning “which comes first, the chicken or the egg?” The need for trainers is present at this particular point in time; recognition of the need is not dominant in the women’s program.

The students in the program are projecting themselves as a coach-athletic trainer which is logical and defensible. As the program of interscholastic competition for women expands (as it will), identification of the need for an athletic trainer for women must be recognized by the administration. Undoubtedly, opportunities for employment will be more prevalent at the college level. We (ISU) have an excellent men’s athletic training staff and facility; however, all of the time and space is utilized by the men’s program. If we are to have any service for the women, we must structure our own, which we have done successfully at Indiana State. Another alternative is that some of the men’s programs are absorbing women into their staff—and that’s nice work if you can get it!!!

Dr. Eleanor St. John

The results of a recent survey indicate that fifteen of the twenty-three schools with undergraduate curriculums accept women into their athletic training programs. Both of the schools with graduate curriculums accept women.

The schools that accept women are:

Undergraduate Programs

Appalachian State University Boone, N.C. 28607 (Ron Kanoy)
Ball State University Muncie, Ind. 47306 (Ron Sendre)
Central Michigan University (5 women enrolled in the program)
Mt. Pleasant, Mich. 48858 (Ken Kopke)

Indiana State University (12 women enrolled; 2 graduates of the program)
Terre Haute, Ind. 47809 (Mel Bickenstaff, MPE; Holly Wilson, WPE)

Indiana University Bloomington, Ind. 47401 (Sam Newberg or Bob Young)

Louisiana State University Baton Rouge, La. 70803 (Marty Broussard)

University of Montana (1 woman enrolled)
Missoula, Mt. 59801 (Dr. Walter C. Schwank)

University of North Dakota (3 women enrolled; 1 graduate of the program)
Grand Forks, N.D. 58201 (A.G. Edwards)

Northeastern University (5 women enrolled)
Boston, Mass. 02155 (Kerkor Kasbalian)
Ohio University (3 women enrolled)
Athens, Ohio 45701 (Skip Vosler)
Oregon State University Corvallis, Oregon, 97331 (Bill Robertson or Dick Irvin)

Southwest Texas State Univ. San Marcos, Tex. 78666 (Bobby Patton)
University of Washington Seattle, Wash. 98105 (Sayers Miller)

West Chester State College (5 women enrolled; 5 graduates of the program)
West Chester, Pa. 19380 (P.B. Donnelly)

Western Illinois University (2 women enrolled)
Macomb, Ill. 61455 (Duke LaRue)

Graduate Programs

University of Arizona (5 women enrolled)
Tucson, Ariz. 85721 (Gary Delforge)

Indiana State University Terre Haute, Ind. 47809 (Mel Bickenstaff, MPE; Holly Wilson, WPE)
W. E. "Pinky" Newell presenting the NATA Undergraduate Scholarship to Keith Papas, Gettysburg College, June, 1973 Atlanta.

(A.T., C.) who does not accumulate a recorded number of continuing education units (C.E.U.) in any three calendar years equal to at least the minimum requirement shall have his certification suspended, with right of appeal.

A motion was made by Mr. Sheridan and seconded by Mr. Crowl to accept the above recommendations.

Action: Approved.

LIX. A motion was made by Mr. Sheridan and seconded by Mr. George to change the Certified Membership Classification to read as follows:

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<th>Code 1</th>
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<tr>
<td>Qualifications for membership:</td>
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<tr>
<td>Must be a Certified Athletic Trainer (A.T.C.)</td>
</tr>
<tr>
<td>Certified and Retired Certified members only are entitled to vote on NATA affairs and/or to hold NATA office.</td>
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Action: Approved.

LXI. Following discussion and revision, it was recommended that the Active Membership Class—Code 2 be as follows:

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<tbody>
<tr>
<td>Qualifications for membership:</td>
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<tr>
<td>Actively engaged in the profession of athletic training</td>
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A motion was made by Mr. Sheridan and seconded by Mr. Bird to accept the recommendation for revision of the Active Membership Class.

Action: Approved.

In June, 1974, a constitutional change will be presented to the membership in regards to the titles of membership class. The proposed terminology, as discussed by the Board of Directors is as follows: "Associate" for Code 2 and "Affiliate" for Code 5.

A motion was made by Mr. Crowl and seconded by Mr. Sheridan for the Board of Directors to accept the terminology change in membership class and that it be included in the Constitutional Change to the membership.

Action: Approved.

LXII. There was discussion in reference to the Student membership class, Code 4.

A motion was made by Mr. George and seconded by Mr. Crowl that the Student Classification be as follows:

STUDENT-CODE 4

Qualifications for Membership:

An individual who is a full-time student in a high school, college, or university and who is performing some of the duties of athletic trainer under the supervision of an athletic trainer, coach or team physician and who express interest in preparing for the profession of athletic trainer is eligible for student membership. He must be recommended by the trainer (preferably an NATA Certified or Active member) coach or team physician under whom he is working. If he ceases to be a full-time student he may not remain in the student membership class after that year.

Experience as a student trainer before enrolling as a full-time student in college shall not count toward requirements for NATA membership (except Student membership) nor count as time engaged in the athletic training profession.

Student members are not entitled to vote on NATA affairs. Action: Approved.

LXIII. Following discussion on the certification requirements and the two-year membership requirement prior to taking the Certification Examination, a motion was made by Mr. Sheridan that an applicant for certification in NATA must be a member of NATA in the Associate or Student class at least one year prior to taking the examination.

Action: Approved.

LXIV. The Professional Education Committee in conjunction with the Certification Committee will formulate a plan for defining continuing education units (CEU) designating number of units to be awarded for participation in continuing education meetings and courses such as NATA Annual Convention, workshops, clinics, courses sponsored by medical organizations, college or university graduate courses related to athletic training or sports medicine, and others.
LXVI. There was discussion, which

LXVII. Tabled at the 1973 Mid-Year

LXVI. All names being submitted to

LX. Sheridan and seconded by Mr.

LXI. The Grants and Scholarship

LXII. The Grants and Scholarship

LXIII. There was discussion, which

LXVIII. There was discussion, which

LXIX. A request was made by the

LXXIV. The Grants and Scholarship

LXXV. There was final and lengthy dis-

LXXI. The Grants and Scholarship

LX. The Grants and Scholarship

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LXV. There was discussion in refer-

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Potpourri (cont. from p.159)

analgesic in 17%, steroid infiltration in 8% and supported ambulation in 9% of the cases. Surgeries were performed in only 6% of the cases. The duration of treatment ranged from one day to more than 6 months. The dispositions of the cases were as follows: 29 were discharged to full activity; 74 were classified as "apparently good"; 1 was "poor"; and 5 were unknown. The term "apparently good" described a patient who had recovered from his injury but discontinued treatment before being discharged.

THE HIGH SCHOOL BACK INJURY

Retrograde data in 592 surgical cases was reviewed and 47 patients selected. Ten teenagers were studied forward from injury to surgery. All dated low back pain to a "High School athletic injury". Initial x-rays were available as well as follow-up films showed. Most were reported as "negative". More recent films showed spondylolysis, spondylolisthesis (L5), disc collapse, injury at thoraco-lumbar junction (T-11 to L-1) (not found initially). Historically, mechanism of initial injury was: 1. Fall on buttocks or thigh, 2. Hyperextension injuries, 3. Jarring activities (gymnasts).

Examiners can establish clinical distinctions and early diagnosis of possible injury at thoraco-lumbar junction (T-11 to L-1) (not found initially). Historically, mechanism of initial injury was: 1. Fall on buttocks or thigh, 2. Hyperextension injuries, 3. Jarring activities (gymnasts). Examiners can establish clinical distinctions and early diagnosis of possible injury at thoraco-lumbar junction (T-11 to L-1) (not found initially). Historically, mechanism of initial injury was: 1. Fall on buttocks or thigh, 2. Hyperextension injuries, 3. Jarring activities (gymnasts). Examiners can establish clinical distinctions and early diagnosis of possible injury at thoraco-lumbar junction (T-11 to L-1) (not found initially). Historically, mechanism of initial injury was: 1. Fall on buttocks or thigh, 2. Hyperextension injuries, 3. Jarring activities (gymnasts). Examiners can establish clinical distinctions and early diagnosis of possible injury at thoraco-lumbar junction (T-11 to L-1) (not found initially). Historically, mechanism of initial injury was: 1. Fall on buttocks or thigh, 2. Hyperextension injuries, 3. Jarring activities (gymnasts). Examiners can establish clinical distinctions and early diagnosis of possible injury at thoraco-lumbar junction (T-11 to L-1) (not found initially). Historically, mechanism of initial injury was: 1. Fall on buttocks or thigh, 2. Hyperextension injuries, 3. Jarring activities (gymnasts).

THE QUESTION OF “WHY FOUR HEAD?” is still unanswered except in a negative way, the muscles act in concert to achieve a common end. T., , "...

I personally ask all trainers to see both sides of the coin and evaluate this bill. We do need the bill for growth, but read the fine print before your signature goes on it.

Dan Cheiko
Graduate Student
Indiana State University
B.S. in P.E., Springfield College, Ill.

Current Lit. (cont. from p.152)


Abstracts (cont. from p.157)

of activity was recorded during three activities: unweighted knee extension from 90 to 180 degrees, weighted knee extension from 90 to 180 degrees, and squatting. The author states that it is now becoming widely recognized that the vastus medialis acts thru the entire range of extension not just at the terminal phase. At the terminal phase the muscle supposedly becomes the most active to complete extension. However, another important function of the medialis at the end of extension is to prevent lateral displacement of the patella.

Authorities believe that the unstable knee is due to the inability to produce the final 15 degrees of extension. Many persons still believe this failure is primarily due to the weakness of the medial head of the quadriceps. It cannot be denied that the final 15 degrees are important, however, Hallen and Lindahl stress the importance of pain and adhesions also limiting the final degrees of extension.

The extensor lag accompanying knee extension is a function of great loss in the mechanical advantage of the whole muscle during the final 15 degrees of the range because of a 60% increase of force is needed to complete extension.

The question of “Why Four Head?” is still unanswered except in a negative way, the muscles act in concert to achieve a common end.

Kent Falb
Dr. Rylander is the Head Athletic Trainer and a professor of Physical Education in the Division of Physical Education, Athletics and Recreation at the University of Delaware at Newark.

He received his BS in Education from Southern Illinois University in 1942, his MA from New York University in 1949 and 10 years later his Ph.D. also from NYU.

Contact sports often provide unusual contusion to the bones and soft tissue of the body to the extent that protective pads which are available sometimes do not adequately protect the injured area. As a result, the athlete’s injury may plague him for an entire season. The injury may not improve or heal as one would normally expect it to or the injury may worsen or develop into myositis ossificans traumatica. These injuries could cause the athlete to play only on a limited basis or eventually cause the athlete to discontinue play altogether.

Contusions to such area as the lateral aspect of the upper arm, the thigh and the plantar surface of the heel often lead to myositis ossificans even when an attempt is made to “bridge” the injury site with additional padding or foam rubber placed around the edges of the pad. This complication usually restricts the normal range of motion in the elbow and knee, and may also lead to the development of a bone spur in the heel.

Examples of other injuries which might need the special protection afforded by a custom-made pad are (1) fractured rib(s), (2) fractured spinous or transverse processes as might be received in contusions to the lumbar area of the back, (3) green stick fractures of the fibula, (4) contusions to the kidney(s), and (5) contusion to the iliac crest. The decision to make a custom-made pad for such injuries will, of course, rest with the physician concerned, the player and his parents.

A physician might allow a player to return to play without restriction before complete healing has taken place—providing adequate protection can be given to the injury. One way adequate and complete protection may be provided for the types of injuries mentioned in the previous paragraphs is a fiberglass device individually constructed from a mold of the injured area. Except in the case of a custom-fitted fiberglass heel cup, these devices are usually padded with only a 1/8” thick layer of sponge.

Custom-Made Pads

Individually constructed, fiberglass pads may be made as follows:

1. Make a mold of the injured part or area using fast setting plaster bandages 2 to 4 inches wide. Cover an area larger than the immediate area of tenderness.
2. Remove this mold after it has set and mark the point of maximum tenderness on the inside of the mold.
3. Coat the inside of this mold (the female mold) with vaseline, and then, using fast setting plaster bandages again construct the male mold whose outer surface will represent the surface of the body part or area concerned. Allow this male mold to set properly, 15-20 minutes, so as not to change the shape of the mold while separating it from the female mold.
4. Wash the final mold, and draw the approximate size of the protective device desired on the mold with a grease or wax pencil.
5. Cut a paper pattern of the area to be protected.
6. Coat this mold with a silicone spray and/or vaseline to facilitate removal of the fiberglass protective device.
7. Cut four pieces of fiberglass cloth* according to the pattern already made.
8. Mix plastic resin** in proper proportions.
9. Impregnate each layer of fiberglass thoroughly with resin.
10. Place the impregnated fiberglass cloth on the prepared mold, ONE piece at a time. Smooth out carefully in place and eliminate any air bubbles.
11. Allow to dry overnight before attempting to remove device from mold.
12. Remove mold, wipe off inside of mold, cut and/or sand to desired shape, and glue a 1/8” thick layer of sponge on the inside of the device.
13. For permanent identification purposes write or print player’s name or initials

**Ortho-Bond Resin, Vernon-Benshaff Co.; 4 parts A to 1 part B.

(Cont. on p. 169)
The editor of Athletic Training, the Journal of the National Athletic Trainers Association welcomes the submission of articles which may be of interest to persons engaged in or concerned with the progress of the athletic training profession. The following recommendations are offered to those submitting articles:

1. All manuscripts should be typewritten on one side of 8½ X 11 inch typing paper, triple spaced with 1 inch margins.

2. Photographs should be glossy black and white prints. Graphs, charts or figures should be clearly drawn on white paper, in a form which will be readable when reduced for publication.

3. The list of references should be in the following order: a) books: author, title publisher with city and state of publication, year, page; b) articles: family names and initials of all authors, title of articles, the full journal title.

4. It is the understanding of the Athletic Training editor that manuscripts submitted will not have been published previously; that the author accepts responsibility for any major corrections or alterations of the manuscript.

5. It is requested that each submitting author include with the manuscript a brief biographical sketch and photograph of himself.

6. For reprints, authors are authorized to reproduce their material for their own use. Unused manuscripts will be returned when accompanied by a stamped, self-addressed envelope.

Address all manuscripts to:

Clinton Thompson
Department of Athletics
Michigan State University
East Lansing, Michigan 48823
District 5 - Mr. Bird..."For the bill with modifications."
District 6 - Mr. Lane..."They (Dist. 6 members) have supported the bill in its intent and principle and they did offer to me some concrete recommendations that they felt would improve the bill."
District 8 - Mr. Crowl..."We (Dist. 9) took a vote at our District Meeting before coming here and they (Dist. 8 members) voted to back the bill."
District 10 - Mr. Melhart..."For the principle of the bill, but felt there should be some changes in it."

Members are encouraged to write their Congressman to express their views on H.R. 7795. Also, correspond with the District Directors for suggestions and opinions. A sample letter to be sent to individual congressmen was presented to each Board member to circulate to their respective district members. The sample letter is as follows:

Dr. Mr.__________

As an athletic trainer at in your congressional District, I want to share my concern with you over the need for more qualified trainers in our community's schools. Each year I treat hundreds of young athletes, but unfortunately, there are both too few qualified trainers and too few school systems willing to secure the services of qualified trainers. The result is that thousands of young Americans suffer needlessly—often crippling and ruinous—wound while participating in athletic competition.

For the past year, the National Trainers Association has worked with Rep. Donald Ronald V. Dellums of California to develop federal legislation which would require all schools engaging in interschool athletic competition to employ certified trainers within an eight-year period. This bill, H.R. 7795—"The Athletic Care Act", also provides assistance to schools for the education and training of athletic trainers. I urge you to join Mr. Dellums as a sponsor of this important legislation, and I hope to receive your views on this issue. Thank you very much.

LXXVI. There being no further business, a motion to adjourn the Board of Directors meeting was made by Mr. Sheridan, severally seconded, voted upon and unanimously carried, whereupon, at five o'clock p.m., June 12, 1973, the meeting was adjourned.
AUTHOR

BEHNKE, ROBERT

DAVIS, OTHO and CAMERON, BRUCE M.

HEINTZ, WILLIAM D.

KLEIN, KARL K.

NATIONAL FEDERATION OF STATE HIGH SCHOOLS ASSOCIATIONS AND THE COMMITTEE ON THE MEDICAL ASPECTS OF SPORTS OF THE AMERICAN MEDICAL ASSOCIATION.

PEPPARD, ALLAN

RYLANDER, ROY C.

SAWYER, WAYNE

SPIKER, JOHN C.

STAUFFER, L.W.

THOMPSON, CLINT

WATTS, FRENWICK

WELK, FRANCIS J.

WILLIE, MICHAEL C.

SUBJECT

COLD VASODILATATION
Behnke, Robert

CURRICULUM
Spiker, John C.

CUSTOM-MADE PADS
Rylander, C. Roy

DENTAL CARE
Heintz, William D.

HOCKEY MASKS
Willie, Michael C.

INSURANCE
Thompson, Clint

KNEE
Klein, Karl K.

LOW BACK
Welk, Francis J.

MYOTONIC MUSCLE DISTRESS
Peppard, Allan

SKIN DISORDERS
Stauffer, L.W.

Watts, Frenwick

SWIVEL FOOTBALL SHOE
Davis, Otho & Cameron, Bruce M.

ULTRASOUND
Sawyer, Wayne

WEIGHT TRAINING
National Federation of State High Schools Associations and the Committee on the Medical Aspects of Sports of the American Medical Association.
Microbicidal power
of a BETADINE antiseptic
was used in
APOLLO 11/12/14 splashdowns

For effective decontamination of water
in whirlpool baths

The same broad-spectrum microbicidal power which was selected for decontamination procedures after Apollo 11/12/14 lunar missions splashdowns is available in BETADINE Whirlpool Concentrate.

BETADINE Whirlpool Concentrate promptly reduces bacterial contamination of water in whirlpool baths and tanks before and during physical therapy procedures...kills microorganisms in the bath, including Pseudomonas strains, E. coli and staphylococci.

Virtually nonstinging, nonirritating and nonstaining to skin, mucous membranes, and to natural fabrics, BETADINE Whirlpool Concentrate substantially provides the efficacy of iodine without its drawbacks. It is also economical to use. As a rule, one fluid ounce of BETADINE Whirlpool Concentrate disinfects about 20 gallons of water. In the presence of heavy concentration of organisms in the water or of open wound infections, concentrations may be increased to as high as 10 ppm. A complimentary dilution chart, giving specific amounts for various tank sizes, is available upon request. Supplied: One (1) gallon.

Purdue Frederick
WHY? "BECAUSE IT KEEPS 'EM GOING"

Professional trainers use Quic­
kick to help keep their players
going through workouts, prac­
tices and competitive condi­
tions. Quickick was specially
formulated as a thirst-quench­
ing and energy-boosting drink
for athletes. Quickick's four
flavors help prevent taste fa­
tigue and help prevent volun­
tary dehydration.

WHAT QUICKICK DOES!
It helps athletes maintain sharper
reflexes in the latter stages of the
game, which in turn helps reduce
injury exposure from dulled re­
flexes, muscle spasms or heat
creamps. Quickick helps restore body
chemical balance quickly. Drinking
Quickick is the proper way to re­
hydrate. It satisfies thirst and helps
reduce body temperature without
bloating. Consequently, your ath­
etes can rehydrate while exercising,
drink as much as they desire after
practice and still have the desire
to eat a large meal.

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BOYCOTT FATIGUE!
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