IN THIS ISSUE:
June 1974 Board of Directors Meeting Minutes
Psychology, Superstitions, and Myths in Sports
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Volume 9
Number 4
December 1974
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The researchers at Nebraska studied the effect of exercise on the EEG and blood chemistry of epileptics and thus far have found that "vigorous aerobic exercise on a motorized treadmill" did not cause epileptogenic activity in most of the 14 subjects. Dr. Rose, Head of the University of Nebraska research team stated that their study had an unavoidable bias in the selection procedure. This was in the fact that the individuals tested had to come forth and volunteer, and undertake a vigorous training program. So, random selection was not a choice.

The study was set up in the following manner:

"Tests for maximum exercise and hyperventilation capacity of each subject were done prior to and following completion of a ten-week physical exercise program. Post training "stress testing" was done within three days of the end of the exercise program. Pretraining was done and measurements taken to determine the "points of exhaustion" of each subject."

In other research one specialist reported treatment of a current professional football player for epilepsy. But stated, "there are no well-known football players, hockey players, or boxers who have permitted publicity about epilepsy."

Noted also was one case of a civil rights suit challenging a private company, from its barring epileptics from work. The suit was against a Sports Parachuting Center in New Jersey. The applicant filed suit and went into skydiving to prove to employers that he could function despite a long history of grand mal seizures. The suit is expected to go to a higher court.

Dr. Rose of the University of Nebraska has found in his studies that he must support the hypothesis that changes in blood chemistry—to "respiratory alkalosis with forced voluntary hyperventilation" and to "metabolic acidosis with muscular effort"—create a "protective effect" in which metabolic acidosis wards off seizures. He also states that his study will show that there is no evidence indicating that elevated lactic acid levels inhibit recovery from exercise.

It is hoped that by early fall research into "seizure threshold" can be turned to competitive sports (probably basketball and volleyball). Dr. Rose adds that epileptic patients "can do anything they want if they are controlled medically." However, Dr. Rose would still not recommend some forms of football, hockey, and boxing to epileptics. "This is a very individual thing—touch football is different from the tackle variety."

Charles Bolton


Rather than leaving sports medicine as the province of the orthopedic surgeon, Fried and Shephard advocate utilization of the skills of the physician, physiologist, biochemist, and psychologist as well as the surgeon. With this broadened perspective, example is shown of four athletes who found competition possible through well rounded insights, rather than orthopedic principles, on the part of the physicians. These include a distance runner whose arch was too rigid to absorb impact (symptoms alleviated by increased shoe padding), a cyclist who suffered severe dyspnea when cycling uphill in cross country events (found to be due to his ventilation rate, which linked to pedaling rate), a swimmer who suffered bronchospasm, dizziness, faintness, and dry mouth when competing in heavily chlorinated water (thought to be an anxiety reaction from an experience in which the swimmer had to be helped from the water in a pool in which the chlorine concentration was high), and another cyclist whose problem was excessive muscular bulk for his endurance events (recommended that he only train for endurance and drop the sprint-event training).

Although a decision is that through a broad-based education and cooperation, those concerned with sports medicine can better advise and care for athletes.

Greg Vergamini


Three grades of cerebral concussion were presented with suggestions as to management of individuals with such problems. The greatest concern should be whether there is an expanding lesion within the cranium. Initial symptoms and signs of concussion are reversible and are also identical with those of an expanding hemorrhage. Therefore, a few simple neurologic tests were presented which may help to determine the urgency of the situation.

The symptoms of cerebral concussion are usually felt by the patient. Such symptoms as consciousness, mental confusion, memory loss, dizzi-
ness, unsteadiness, and tinnitus (ringing, tinking, buzzing, or other sounds in the ear). These symptoms are reversible. However, if there is a progression of the symptoms, this suggests an expanding lesion which demands immediate attention.

The signs of expanding lesion are rather easy to ascertain. Simple fundamental tests which should be used in suspected cases of expanding lesions are listed below.

State of Consciousness—Degree of impairment
Pupils—Inequality
Heart—Unusual slowing
Eye Movements—Nystagmus (“dancing eyes”)
Outstretched Arms—Drift unilaterally
Finger to Nose Test—Asymmetry (lack of symmetry)
Heel to Knee Test (eyes closed)—Asymmetry (lack of symmetry)
Romberg Test—Falling
Tandem Walk—Inability to perform

This examination could be done near the bench.

This paper was not an attempt to make a neurologist of the physician, coach, or trainer but to re-emphasize the use of fundamental tests which will indicate the urgency of the situation one may face.

Tom Carter

***


Although the pathological lesion in tennis elbow has not been convincingly demonstrated, it appears that most methods of treatment have in common the reduction of tension in the common extensor origin on the lateral humeral epicondyle. To provide a simple method of achieving this desired relief of tension the author has designed a forearm support band that is being produced commercially. The support is a 5.4 centimeter wide band of heavy-duty non-elastic fabric lined with foam rubber padding to prevent slipping. Use of the support is advised only during actual play to avoid excessive tightness and the band is removed during periods of inactivity to avoid venous congestion and edema. In acute cases, treatment with the forearm band is augmented with local anesthetic and steroid injections into the tender tissues distal to the lateral epicondyle. Oral phenylbutazone or aspirin may also be prescribed.

Forty patients have been treated with this support. Twenty-three of the twenty-eight who were treated with the forearm band and injection therapy were relieved of pain, while ten of the twelve treated with the forearm band alone were relieved.

Once relieved, patients are advised to continue using the band during play for at least a year to avoid recurrence. This tennis-elbow support has several advantages. It is light in weight, easy to apply, and does not interfere with elbow motion, thereby allowing normal tennis strokes.

John Wells

***


Several different theories and statistics about the how and why of hockey injuries were discussed in this article.

Dr. Nagobads draws his conclusions from fifteen years of experience with the Minnesota Fighting Saints, U.S. Olympic Team and the University of Minnesota hockey teams. Due to the increase of popularity of hockey in the United States, injuries in this sport have greatly increased. The majority of these are minor bruises, contusions, or cuts of the face. Most of the cuts, 90%, are caused by sticks and although drastic looking, are seldom severe. The more severe injuries are injuries to the joints and head injuries. There are more severe head injuries in the professional ranks, due to the fact that the professional players are not required to wear helmets, as do the college players. The majority of head lacerations are caused by sticks and pucks, while most concussions (61%) and skull fractures (33%) come from hitting the head on the boards or the goal post.

Injuries to the joints can be reduced by more special exercises, weight training and specific calisthenics. The hockey players should work harder during the off season to maintain a high level of physical condition. Bicycling has been found very helpful in strengthening collateral ligaments of the knee. More practical and effective off ice training programs should be encouraged in an effort to prevent joint oriented injuries.

Donald P. Roach
happy holidays

FROM THE

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JOURNAL COMMITTEE
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FROM THE PRESIDENT'S DESK

Dear NATA Member,

Hope most of you are able to breathe a little easier after a busy football season. As was stated in the first letter to the membership, published in the September Journal, there will be a letter in each Journal informing the members of recent policy decisions by the NATA Board of Directors. This letter will deal mainly with the subject of continuing education. In June, 1974 the NATA Board of Directors made continuing education a part of the NATA By-Laws.

Some of the highlights of this By-Law read as follows:

“Implementation of the NATA program of continuing education will take place on January 1, 1976.”

The interim period will be used for a pilot study on continuing education. The By-Laws go on to state:

“A person who is once certified as an athletic trainer (ATC) remains certified as long as he or she meets the minimum requirement for continuing education and only as long as such requirement is met. To maintain certification or associate membership the minimum number of units to be accumulated every three (3) years shall be nine (9) continuing education units. A certified athletic trainer who does not accumulate a recorded number of nine (9) C.E.U.’s every three (3) calendar years shall have his certification reviewed and subject to suspension.”

Please be aware of what this By-Law is requiring each of us to do. We must satisfy the continuing education requirement, if we wish to retain our certification. The Board of Directors realizes this will be difficult for some of us and possibly a hardship for others. However, continuing education is a necessity if an athletic trainer wishes to maintain his competence.

Please read the article “Continuing Education or Obsolescence in Athletic Training” by Bud Miller in the September 1974 issue of Athletic Training. This article will give you more information on continuing education and how the requirements may be met. Answer the questionnaire which is in this Journal and return it promptly. Then, we on the Board of Directors and members of the Professional Education Committee will know your feelings on and your ability to meet the continuing education requirement. Let your District Director or the Continuing Education Committee know of any suggestions you have concerning this very vital subject.

Sincerely,

Frank George
President NATA
November 15, 1974

Dear Members:

There has been much discussion in the past several months in reference to the selection of athletic trainers for the various Olympic games. The United States Olympic Committee Medical and Training Services Committee recently appointed for the Pan American Games to be held in Sao Paulo, Brazil, April 26 to May 11, 1975 the following list of medical, training and nursing personnel:

Trainers:
- Robert Lane (Head Trainer) University of Texas at Arlington
- Z. M. “Mil” Blickenstaff - Indiana State University
- Lewis C. Crowl - Sacramento, California
- Gary Delforge - University of Arizona
- Charles Demers - Deerfield Academy, Deerfield, Massachusetts
- William Flentje - University of Missouri - Rolla, Missouri
- Billy Hill - Ohio State University
- Kenny Howard - Auburn University, Alabama
- William Newell - Purdue University, Indiana
- Vic Recine - Sayresville High School, New Jersey
- John Sciera - Cortland College, New York
- Robert Sinkler - Princeton University, New Jersey

Nurses:
- Barbara Sabasteanski - Brunswick, Maine
- Jane Person - Denver, Colorado

Physicians:
- John B. Anderson, M. D. (Chief Physician) - Brunswick, Maine
- Thomas J. Flately, M. D. Orthopedist - Milwaukee, Wisconsin
- Matthew D. Branche, M. D. - New Rochelle, New York
- Irvind Dardik, M. D. - New York, New York
- Jerome H. Patmont, M.D. - Berkeley, California

Dentist:
- Dr. Cort Boxwell - Denver, Colorado

Selected from the NATA list were: Delforge, Demers, Flentje, Howard, Newell, Recine, and Sciera.

Selected by the USOC, but not on the NATA list were: Crowl, Blickenstaff, Hill, and Sinkler.

Lew Crowl recently notified the USOC that he would not attend the games because his name was not on the NATA recommended list. This took a great amount of courage and integrity on the part of Lew Crowl and the NATA appreciates his admirable decision. He is to be commended by his peers!

Trainers for the Summer and Winter Olympic Games have not yet been selected.

Respectfully Submitted,

Otho Davis
Executive Director
BOOK REVIEWS

Ken Murray
Certified Athletic Trainer

COMMENTS IN SPORTS MEDICINE
by: Timothy T. Craig, PhD, Editor
American Medical Association
230 pages

Comments in Sports Medicine is a composite, single volume with new topics and re-editing of the former booklet, Tips on Athletic Training. It is designed for athletic trainers, physicians and coaches as a very good quick reference to a variety of sports medicine issues. It deals with such topics as health problems, medical concerns, athletic accident prevention, injuries, and subjects useful to athletics. Its value lies in its covering of a number of subjects and providing at the end of each topic a list of additional references related to each topic. It also contains a glossary of related terms and an organizational index with addresses of a number of associations useful for references and materials.

This book is very useful for anyone interested in sports medicine and is a great asset to your library.

WORKBOOK:
FUNDAMENTALS OF ATHLETIC TRAINING FOR WOMEN
By: Holly Wilson,
Certified Athletic Trainer
University of Iowa
List Price: $5.50 plus $.60 postage
267 pages — Illustrated

With the growth of women’s athletics, the need for good training programs for women is being recognized across the country. But where do you start in setting up a program? Holly Wilson's workbook is a good beginning.

Constructed as a blank outline for a 25-30 hour lecture course, with reference lists at the end of each section, the workbook covers the basics of injury prevention and car, conditioning for various sports, and rehabilitation programs. But this reviewer feels that one of the book's biggest assets is that it goes much further by including the basics of setting up the training program itself, with instructions and diagrams for building inexpensive equipment, samples of medical forms and treatment logs, and hints on money-saving ways to improvise when the budget is limited and equipment almost non-existent — a situation many women's programs are faced with! It also includes an objective and problem-solving test, with answers included, that the reader can use to test herself or a class.

This book would be a very useful resource for any beginner, be it teacher, coach or student.

GROUND BREAKING ON HENRY SCHMIDT PARK

Ground breaking and start of construction on the Henry Schmidt Park, on Saratoga Avenue at Las Padres Boulevard, Santa Clara, took place Wednesday, Oct. 16, 1974 on the park site.

Among officials at the brief ceremony, were Bing Crosby and his family, the Rev. Thomas D. Terry, S.J., president of University of Santa Clara; the Rev. Patrick Carroll, S.J., SCU athletic moderator; Pat Malley, Bronco athletic director, and Santa Clara Parks and Recreation Department officials.

The $220,000 neighborhood park, which will be one of the finest and largest parks in the Santa Clara system, is named after Henry Schmidt, who is in his 48th straight year as Santa Clara athletic trainer. Schmidt, a 1932 SCU alumnus, has been trainer at one university longer than anyone in the history of NCAA four-year colleges.

Target date for completion of the 8.5-acre facility is July, 1975.

The park will have a large community center building which will house Schmidt’s massive collection of sports artifacts and memorabilia, six lighted tennis courts, a football-soccer field, a Little League baseball diamond, children’s play area and other turfed play areas.

Schmidt, who is justly proud of his many “firsts” while serving for almost a half century as SCU trainer, is a former trainer for the San Francisco 49ers, Los Angeles Rams and St. Mary’s Pre-Flight football programs. He lives in Santa Clara about a block from his park.
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CURRENT LITERATURE
by Ed Christman
Certified Athletic Trainer


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ACCIDENTS ASSOCIATED WITH HOCKEY EQUIPMENT

An estimated 30,000 persons received hospital emergency room treatment during the 1973 fiscal year for injuries associated with hockey equipment.

Lacerations, fractures, strains/sprains, and contusions/abrasions are the most frequent product-related injuries. They most often result from being hit by a puck, hit by a stick, cut by a skate, being 'checked,' or falling into the sideboards of the rink.

Injuries to the head and face, including the eyes, ears, and mouth, accounted for 64 percent of the total injuries reported, or 1,009 injuries in the danger area of the head. Eleven concussions were reported, and almost all of the remaining facial and head injuries were fractures, lacerations, or contusions/abrasions.

Injuries to the lower arm (6 percent), lower leg (11 percent), and the fingers (7 percent), accounted for most of the remaining cases.

A total of 843 lacerations, 373 contusions/abrasions, 155 fractures, and 140/sprains were recorded during the period.

The age span from primary through high school registered almost 80 percent of the injuries. The age groups 10-14 and 15-19 each reported 35 percent of the total injuries and the group 5-9, 8 percent. Only 12 percent of the injuries occurred to the age group 20-24, and 9 percent to persons 25 years and older. Of the total, 1,607 injuries recorded during the period, 91 percent (1,457) were to males.

DRUG PAMPHLET FOR COACHES

The NCAA has published a sixteen-page informational pamphlet on drugs for coaches. It contains some basic concepts and history of drug use in athletics. It discusses the different drug forms, how to recognize their use, and what the coach can do.

Copies of this pamphlet can be obtained for $.25 a copy from NCAA, 1221 Baltimore, Kansas City, Missouri 64105.

DRUGS AND SPORTS DON'T MIX

The use of drugs as an aid to athletic performance has been condemned by the American Academy of Pediatrics' Joint Committee on Physical Fitness, Recreation, and Sports Medicine in the September issue of Pediatrics, the Academy's monthly scientific journal.

Noting that some athletes and coaches have tried nutritional, physical, and pharmacological methods of increasing performance, the committee said "there is no scientific basis for any such practices." The statement dealt in particular with two types of drugs—anabolic steroids, used mainly for weight gain, and amphetamines.

The committee said several side effects have been associated with the use of steroids, including precocious sexual development in boys and the possibility of masculinization in girls.

Research in the use of steroids has not demonstrated increases in strength, the committee said. "Athletes who claim gain in weight and increased athletic performance appear to have taken self-administered doses of steroids far beyond the therapeutically recommended amount of these drugs," the committee said. "The results are questionable at any age, and highly undesirable in adolescence."

On amphetamines, the committee said the drugs may improve physical performance if the athlete is fatigued, but the individual's judgment, and his estimate of his own performance, may be impaired. "The amphetamines are dangerous because of their hazardous effect of masking the signs of fatigue or exhaustion," the statement said. "Thus, the drug may be harmful to the stressed athlete." More harmful side effects—including psychological dependence—may occur with chronic use, the committee noted.

The committee also warned against the frequent use of "downers"—mainly barbiturates—to help athletes obtain restful sleep before a performance. Their frequent use is hazardous because of "detrimental effects on performance and the possibility of psychological dependence," the committee said.

The committee said there is no
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**SPORTS AND PREGNANCY**

The Victorian notion that a pregnant woman must be shielded from physical stress has broken down. Many gynecologists now agree that the first two or three months of pregnancy probably have no effect on sports performance. There were three pregnant gold medal winners in the 1956 Olympics. One physician remarked that he saw no harm if a woman wanted to continue in athletics up to the last day of pregnancy.

Physicians also have concluded that there is no evidence that women athletes have difficulties in conceiving. Sports women actually seem to have fewer complications in child birth than non-athletes, and their first stage of labor is shorter. If there are no complications, an athlete can usually resume activity within a few weeks after delivery.

---

**SYNTHETIC TURF STUDIED**

Synthetic football playing turf increases player speed and thus may set the stage for higher collision forces and more severe injuries, according to a report to the American Academy of Orthopaedic Surgeons.

College football players were timed in a series of 40-yard dashes, both in a straight line and zig-zag course. The average reduction of running time was about .2 seconds on the straight sprint and about .24 seconds in the slalom course as compared with grass. The slower players, who also were the heaviest, found the synthetic turf most advantageous.

It has been calculated that with the increased speed afforded by synthetic turf, plus the increase in player weight (11 per cent in the last 30 years), the collision force has increased about 13 per cent on synthetic turf. The study also indicated that Astro Turf absorbed 10 per cent less energy on impact than Poly Turf or grass and 6 per cent less energy than Tartan Turf.

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**AAP ISSUES MINIBIKE WARNING**

The American Academy of Pediatrics has recommended that state legislatures outlaw operation of minibikes by children. An AAP committee felt minibikes were dangerous because of poor handling resulting from a short wheel base and small tires; insufficient acceleration; inadequate brakes; the small size; poor visibility; and inadequate protection of drivers. The Bureau of Product Safety estimated that 75,000 minibike injuries occurred in 1973.
NOT FOR MEN ONLY

Holly Wilson
Certified Athletic Trainer

THINGS YOU'VE ALWAYS WANTED TO KNOW ABOUT TITLE IX, BUT WERE AFRAID TO ASK
By Peg Burns Ph.D

What is Title IX?
Title IX of the Education Amendments was enacted by Congress June 24, 1972 and provides that "no person in the United States shall on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance".

What does Title IX cover?
In educational institutions receiving federal funds it covers admission policies, with certain exceptions, treatment of students in all programs and activities and employment.

Do many educational institutions receive financial aid?
Yes, most if not all receive aid in some form. This aid ranges from research grants to student loans to subsidies to school lunch programs.

Have guidelines been published to aid in interpretation of Title IX?
Yes, the Department of Health, Education and Welfare has published in the Federal Register on June 20, 1974. This publication should be available in any major library. Copies are also available from the Office of Civil Rights, Department of HEW, Washington, D.C.

Are these Regulations in final form?
No. Following the publication of the regulations the Department of HEW allowed for a comment period. This comment period officially ended on October 15, 1974. During that period hearings were held at a number of regional sites and individuals and groups were invited to attend these meetings and/or send comments to the Director of the Office of Civil Rights of the Department of HEW. Comments received after that date may also be considered until the regulations are prepared in final form. The proposal may be changed in light of the comments received. The preparation of the final form of the regulations is predicted to take until 1975.

Are the comments treated as public information?
Yes. Comments received in response to Title IX will be available for public inspection in Room 3256, 330 Independence Avenue, S.W., Washington, D.C. 20201 between 9 a.m. and 5:30 p.m. Monday through Friday until the regulation is published in final form. Copies of representative comments will also be made available for public inspection in the office of each Regional Director of the Office of Civil Rights during normal business hours. The address and locations of the Regional offices are available in the Federal Register.

Do the regulations say anything specific to physical education?
Yes. Section 86.34 states "A recipient (Educational institution receiving federal funds) shall not provide any course or otherwise carry out any of its education program or activity separately on the basis of sex, or require or refuse participation therein by any of its students on such basis, including health, physical education..."

How have physical educators reacted to this stipulation?
There have been mixed reactions, some support it while many argue that in the post-pubertal years where well documented differences in strength, speed and size are factors, students should be allowed the option of co-ed or single classes.

Do the regulations say anything specific to athletics?
Yes. The entirety of section 86.38 is devoted to athletics.

(a) General. No person shall, on the basis of sex, be excluded from
The employment rights of female athletic trainers and graduate assistants is provided for under 86.41. The general employment statement reads, "No person shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination in employment, or recruitment, consideration, or selection thereof, whether full-time or part-time, under any education program or activity operated by a recipient which receives or benefits from Federal financial assistance." Equality of opportunity in regard to promotions, tenure, job assignments, compensation, etc. is also provided for in this section.

Many questions concerning Title IX have not been answered, and cannot be answered at this time, but I would like to pose three final questions.

Why was Title IX necessary?
Because for nearly two hundred years of this country's existence our educational institutions have not voluntarily ended sexual discrimination.

What is the intent of Title IX?
To end discrimination based on sex.

Should bureaucratic red tape be used as an excuse for continued discrimination?
No, but that is happening. It has been well over two years since Congress enacted the Education Amendments and the question still frequently heard from educational administrators is "What must we do to comply with Title IX?" Shouldn't they be asking, "What ought we to do to be fair to all students?" Surely justice rather than compliance should be the central issue!

Wouldn't it be nice if the final draft of the guidelines didn't have to be written at all?

Report from the Ad Hoc Committee on Women in Athletic Training

Liaison representatives have been appointed by Frank George, President of the NATA, to the National Association for Girls and Women in Sports (GWS) and the Association of Intercollegiate Athletics for Women (AIAW). Holly Wilson is the liaison to the GWS and Marge Alborn, Indiana University, to the AIAW.

The Ad Hoc Committee is continuing its status for another year. The committee would welcome suggestions on areas of concern so that it can establish its priorities for the coming year. Please contact the committee member in your area. The names and addresses of all the committee members are on the list of certified women trainers, except Kaye Cosby, Indiana State University, and Sue Schneider, Michigan State University.
Certified Women Trainers
Currently there are sixteen women who have been certified by the NATA. Most of these women were certified in the last two years which is an indication of the increased interest shown by women in the field of athletic training.

*1. Marge Albohm, Department of Intercollegiate Athletics, Assembly Hall, Bloomington, IN 47401
*2. Linda Weber Daniel, Ohio State University, Columbus, Ohio
*3. Claudette DeLamater, State University of New York, 1400 Washington Avenue, Albany, New York 12203
*4. Joanne Dolcemaschio, Brown University, Providence, RI 02912
*5. Virginia Forsyth, 1043 Wilmington Pike, West Chester, PA 19380
*6. Katherine Gallenher, 172 Woodbridge Avenue, Sewaren, New Jersey 07077
*7. Linda Hammett, Lake Braddock Secondary Schools, 9200 Burke Lake Road, Burke, VA 22015
*8. Sherry Kosek, University of Washington, Seattle, Washington 98105
9. Marsha Teets, University of Arizona, Tucson, AZ 85721
*10. Linda Treadway, West Chester State, West Chester, PA 19380
*11. Mary Ann Visker, 3833 N. 4th Avenue, Tucson, AZ 85705
*12. Doris Wickel, 42-04 Fox Run Drive, Plainsboro, New Jersey 08536
*13. Gail Weldon, Western Illinois University, Macomb, IL 61455
*14. Holly Wilson, Field House or Women's Physical Education, University of Iowa, Iowa City, IA 52242
15. Maryann Zickler, 1126 Bell - #4A, Denton, TX 76201
16. Mary Wilson, Field House or Women's Physical Education, University of Iowa, Iowa City, IA 52242

If I have omitted anyone, please contact me so that your name can be added to the list.

* Member of Ad Hoc Committee on Women in Athletic Training

Interesting Reading:

CALENDAR OF COMING EVENTS


December 16-19, 1974—A refresher course in emergency care will be sponsored by the American Academy of Orthopaedic Surgeons. For information, write to the American Academy of Orthopaedic Surgeons, 430 North Michigan Avenue, Chicago, Illinois 60611.

December 27-28, 1974—The Second Annual Symposium on Innovations in Athletic Conditioning and Sports Medicine will be held at the University Extension, University of California, Berkeley. For more information, contact Nathan W. Cohen, Department B, University Extension, University of California, 2223 Fulton St., Berkeley, CA 94720.


February 1, 1975—The Dallas-Fort Worth Metroplex Trainers Clinic will be held at Trinity High School in Euless, Texas. For further information, contact Aubrey Fisk, Trinity High School, 500 N. Industrial Blvd., Euless, TX 76039.

February 10-13, 1975—"Skiing Injuries" will be sponsored by the American Academy of Orthopaedic Surgeons at Snowmass-at-Aspen, Colorado. Information may be obtained from the American Academy of Orthopaedic Surgeons, 430 North Michigan Avenue, Chicago, Illinois 60611.

March 14-15, 1975—The District 4 meeting will be held at the Ann Arbor Inn, Ann Arbor, Michigan. District 4 members contact your District Secretary for more information.

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.
EDITOR’S COMMENTS

ABC MEET NATA

Recently the ABC television network ran a hour long program on the dangers of injuries in athletics in their “ABC News Closeup” series. Although this program did do a service in showing the public that serious injuries can occur while playing various sports, especially high school football, the approach was rather fear instilling. It may have made the mothers of America think that paralyzing injuries are an everyday occurrence. This approach probably did make a better show for the viewers, but how about all the youngsters that will not be allowed to play football now because of the parents viewing the program?

Also, according to the program if a coach is not certified in the coaching techniques of his sport and a doctor is not readily available there is no one else to turn to for help. This should be rather disturbing for most of the NATA members. I would certainly hope we are preparing young men and women for just this purpose, not to mention the fine trainers who are already on the job. Perhaps a card or letter to Mr. Jules Burgman concerning the membership’s feelings would be justified. It is true that there are too few high school trainers now, but the NATA should be recognized for its efforts in providing the person to turn to for help in the absence (or presence) of the certified coach and/or team physician.

THANKS JOURNAL COMMITTEE

This issue brings to a close the second volume of Athletic Training for this Editor-in-Chief. I must thank all of those who have contributed their thoughts, time, and efforts to this publication. A special thanks must go to the core group, the Journal Committee members, for without them it would be at least impossible.

ANSWER THE SURVEY

Please take note of the letter from our President, Frank George, and the survey questionnaire on the new Continuing Education program. This is a very large step for any professional organization to undertake and it will have an effect on all of us. Your thoughts on the program are most important at this formative stage. Your feelings could bring up a new aspect of the situation or help correct any problem areas. Please take the time to fill out and mail the questionnaire as soon as possible. Get it in before the deadline.

JOURNAL DEADLINES

In order to keep the Journal coming out on time with all the pertinent information the deadlines for materials must be strictly enforced. Any announcements, letters to the editor, points of interest, etc. must be sent in by the following deadlines:

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Send the information to the following address:
Rod Compton
Athletic Training
Sports Medicine Division
East Carolina University
Greenville, NC 27834

SEASON’S GREETINGS

May everyone have a very happy holiday and may 1975 be a most rewarding year for you all.

Rod Compton
Editor-in-Chief
Recognizing the responsibility of the National Athletic Trainers' Association to give encouragement and guidance to the development of graduate level educational programs in athletic training, the NATA Board of Directors created a committee on graduate education in June of 1972. This group, functioning as a sub-committee of the previously established Professional Education Committee, was charged with the responsibility of developing curriculum guidelines which would give direction to those colleges and universities interested in developing master's level programs in athletic training. As a result of the committee's efforts during the first year of existence, curriculum guidelines specifying NATA required coursework and clinical experience were developed.

**The Graduate Certificate Program**

Specific graduate level coursework and clinical experience requirements have been incorporated into what has been identified as the Graduate Certificate Program in Athletic Training. Upon completion of this program, students may be awarded a Graduate Certificate by the National Athletic Trainers' Association as recognition of their educational achievements. The program requirements are presented here for the benefit of those colleges and universities interested in having their graduate level curriculums approved by the NATA.

**Prerequisites for Acceptance into Graduate Certificate Programs**

Students accepted into Graduate Certificate Programs in Athletic Training should meet the following prerequisites:

A. Bachelor's degree from an approved four-year undergraduate college or university.

B. Completion of the following NATA required **undergraduate** courses and clinical experience:
   1. Anatomy (1 course)
   2. Physiology (1 course)
   3. Physiology of Exercise (1 course)
   4. Applied Anatomy and Kinesiology (1 course)
   5. Psychology (2 courses)
   6. First Aid and Safety (1 course)
   7. Nutrition (1 course)
   8. Remedial Exercise (1 course)
   9. Personal, Community and School Health (1 course)
  10. Basic Athletic Training (1 course)
  11. Advanced Athletic Training (1 course)
  12. Laboratory or practical experience in athletic training to include a minimum of 600 total clock hours under the direct supervision of an NATA Certified Athletic Trainer. At the discretion of the school, course credit may be given for clinical experience.

In the event that any of the above coursework is offered as part of the graduate curriculum, either in the area of specialization in athletic training or in the general curriculum, the student may satisfy undergraduate course deficiencies by satisfactory completion of the graduate course (i.e., he does not have to take an undergraduate course if a graduate level course is available to him in his specific area of deficiency).

At their discretion, the college or university may allow a student who is deficient in one or more of the above courses to enroll in the Graduate Certificate Program with the stipulation that the requirements be made up before a Graduate Certificate in Athletic Training is awarded. The college or university may also allow a student who has completed at least 300 clock hours of laboratory or practical experience at the undergraduate level to enroll in the Graduate Certificate Program. In this event, the student must complete an additional 600 total clock hours of laboratory or practical experience under direct supervision of a Certified Athletic Trainer at the graduate level.

**Graduate Coursework and Clinical Experience**

A. **Required Courses and Clinical Experience**

NATA approved graduate level programs in athletic training must include the coursework and clinical experience outlined below. Before a Graduate Certificate in Athletic Training can be awarded, the student must complete graduate work in the following areas:

1. Advanced Athletic Training (2 courses)
2. Laboratory or practical experience in athletic training to include a minimum of 300 total clock hours under the supervision of an NATA Certified Athletic Trainer. At the discretion of the school, course credit may be given for clinical experience.
3. At least one course in the follow-
It is recommended that the above coursework constitute the core of a twelve to fifteen unit area of specialization or minor in the Graduate Certificate Program.

B. Recommended Coursework

Suggested graduate level courses to complete the area of specialization in athletic training include:

1. Corrective or Therapeutic Exercise
2. Adapted Physical Education
3. Therapeutic Modalities
4. School Law
5. Evaluation in Physical Education (Tests and Measurements in Physical Education, etc.)
6. Pharmacology
7. Any of the courses not selected to satisfy requirements under A, 3 listed above.

Awards of the Certificate in Athletic Training by the NATA do not require actual completion of the Master's degree or attainment of a secondary school teaching certificate provided all of the above requirements are met. Completion of requirements for both the Master's degree and a teaching certificate is, of course, strongly recommended. It should be noted that awarding of the Graduate Certificate designates completion of NATA required coursework and clinical experience only and should not be confused with additional requirements necessary to become a Certified Athletic Trainer.

Rationale for the Graduate Certificate Program

Encouragement for the development of graduate level programs in athletic training is based on the realization that an opportunity should be provided for advanced, in depth, and concentrated study beyond the bachelors degree level. The Graduate Certificate Program is predicated on sound undergraduate preparation in athletic training and should be considered an extension of professional preparation for those who have completed NATA undergraduate coursework and clinical experience requirements. With the tremendous breadth of knowledge and skills required of the contemporary athletic trainer, opportunities for advanced study seem to be clearly indicated.

It is also suggested that Graduate Certificate Programs be so designed as to lead to NATA recognition as a Certified Athletic Trainer for those who have not yet completed the necessary requirements at the undergraduate level. Numerous aspiring athletic trainers who have not had an opportunity to attend an NATA approved undergraduate school are seeking opportunities for formal coursework and supervised clinical experience leading to certification. Many of these students, however, have previously satisfied a number of NATA undergraduate course requirements because of undergraduate majors in physical education, health, pre-physical therapy, or biological science. Flexibility in the requirements for acceptance into Graduate Certificate Programs allows a college or university, at their discretion, to accept students with NATA deficiencies. Thus, through a combination of undergraduate and graduate level coursework and clinical experience, a student can be provided with an opportunity to satisfy NATA curriculum requirements and become eligible to take the National Certification Examination.

While flexibility does exist regarding the utilization of graduate level courses to satisfy basic NATA certification requirements, the integrity of the Graduate Certificate Program is maintained by calling for the completion of additional clinical experience and specific courses in athletic training and the basic sciences at the graduate level.

Further Information

To date, only two graduate curriculums in the United States are recognized by the NATA. A total of fifteen graduate certificates have been awarded to graduates of Indiana State University and the University of Arizona. Approximately twelve additional graduate schools are currently developing Graduate Certificate Programs and have expressed an interest in doing so. Continued development of these programs is encouraged while the interest of additional schools is invited. Further information regarding Graduate Certificate Programs in Athletic Training and application forms for NATA approval can be obtained by writing to Gary Delforge, Chairman, NATA Subcommittee on Graduate Education, Department of Health, Physical Education and Recreation, The University of Arizona, Tucson, Arizona, 85721, or to Sayers “Bud” Miller, Chairman, NATA Professional Education Committee, College of Health and Physical Education, The Pennsylvania State University, University Park, Pennsylvania, 16802.

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The first session of the Board of Directors Meeting was called to order at 7:00 p.m. by Mr. Robert Gun, President. The following were in attendance:

District 1: Frank George
District 2: Francis J. Sheridan
District 3: Craig J. Lewellyn
District 4: Keni Falb, representing Roland LaRue
District 5: William Flentje
District 6: Eddie Lane
District 7: Warren Lee
District 8: Lewin Crowl
District 9: Eugene Smith
District 10: Richard Melhart
President: Bobby Gun
Executive director: Otho Davis
Parliamentarian: Bruce Melin

I. The meeting was opened with a prayer by Mr. Gun.
II. The treasurers report was presented to the Board of Directors. A motion was made by Mr. Crowl and seconded by Mr. Lane to accept the report. Action: Approved.

III. The Audio-Visual Aids Committee budget request for $1500.00 covering 1974-75 was discussed. A motion was made by Mr. George and seconded by Mr. Melhart to approve the request. Action: Approved.

IV. There was a lengthy discussion in reference to the Drug Education Committee and the NATA request of Dr. John Wells, Committee Chairman, not being accepted to the NCAA Drug Education Committee after the NCAA had requested NATA to make a recommendation. This discussion was tabled for a later date.

V. Mr. Fred Hoover, National Convention Chairman, appeared before the Board of Directors with a report on future sites and recommendations for consideration. The 1974 Convention was discussed.

VI. The Ethics Committee report was discussed. There was no budget request. Submitted for consideration were changes in the Code of Ethics. They are as follows:

Article I. Section 1-Athletic in General
An Athletic Trainer should do all in his power and ability to further develop and improve all branches of athletics and show no discrimination in his interests or efforts.

Article I. Section 7-Fellow Trainers: Change Paragraph 2 to read:
Any trainer who by his conduct or comments publicly discredits or lowers the dignity of members of his profession is guilty of a breach of ethics.

Section 8. Drugs—Add to Code
The membership of the National Athletic Trainers Association takes a strong stand against the unauthorized use and non-therapeutic use of drugs. The National Athletic Trainers Association recognizes that the best and safest way to aid coaches in installing athletic in General

VII. The Grants and Scholarship Committee report and request was discussed. The Committee has helped establish, with Board of Directors approval, two annual Scholarship Awards. The Award is based upon superior performance in the National Certification Examination during the preceding calendar year. The Award has been named in honor of the late Eddie Wojcik. The recipient from Rice University.

The following is a list of the recipients of the various NATA Scholarship awards:

Eddie Wojcik Scholarship Awards—Mr. John P. Repsher, Athletic Trainer, North Adams State College, North Adams, Massachusetts; Linda Jo Hammett, Burke, Virginia
Undergraduate Scholarship Award—Donald Lee Kaverman, Michigan State University, East Lansing, Michigan

Post Graduate Scholarship—William Jack Amos, Furman University, Greenville, South Carolina

President’s Challenge Award—Donald Lee Kaverman, University of Washington, Seattle, Washington

Lansing, Michigan

The sponsoring firm, Larson Laboratories, Inc., has agreed to establish an annual Award to be given for outstanding contributions in Sports Medicine by a Doctor of Medicine or Osteopathy. The single award will include an extremely nice trophy, custom made to be in the doctor’s hand, so that he may display and always remember this Award. Another aspect of recognition to the honored individual is the privilege of selecting a worthy individual or institution as a recipient of a $1500.00 Grant for either research or education in Athletic Health Care.

The Committee has applied with the Internal Revenue Service for Tax exempt status by filing Form 1023 and is now awaiting their reply.

The following is a list of the recipients of the various NATA Scholarship awards:

Eddie Wojcik Scholarship Awards—Mr. John P. Repsher, Athletic Trainer, North Adams State College, North Adams, Massachusetts; Linda Jo Hammett, Burke, Virginia
Undergraduate Scholarship Award—Donald Lee Kaverman, Michigan State University, East Lansing, Michigan
Post Graduate Scholarship—William Jack Amos, Furman University, Greenville, South Carolina

President’s Challenge Award—Donald L. Cooper, M.D., Director Student Health Center, Oklahoma State University, Stillwater, Oklahoma

A motion was made by Mr. Crowl and seconded by Mr. Flentje to approve the Grants and Scholarship Committee budget request. Action: Approved.

VIII. The History and Archives Committee report was discussed and the Board of Directors gave Chairman, Mr. O’Shea a “Vote of Thanks” for the job well done on the history of NATA. This work was completed as a Masters Thesis at Kent State University titled “The History and Development of the National Athletic Trainers Association.”

IX. The Honor Awards Committee report was discussed and previously approved. It is to be noted that the Heims Hall of Fame, which was changed to “United Savings” is now changed again. The new name is “Citizens Savings Hall of Fame.” The following men will be accepted into the Hall of Fame on June 10, 1974 at the Honor Awards Banquet:

District 1: Anthony Dougal, Boston University
District 3: Edward Block, Baltimore Colts Football Club
District 5: Laurence “Porky” Morgan, Kansas State University
District 7: Siegfried Lincoln, Kansas City Chiefs Football Club
District 8: Ross Moore, University of Texas at El Paso
District 6: Wayne Rideout, Bryan High School, Bryan, Texas
District 8: Lincoln Kimsa, San Francisco 49ers Football Club

The following athletic trainers will receive the Twenty-Five Year Award for their long tenure in the profession:

District 1: William Sanko, Worcester Academy
District 2: Edgar “Hal” Briggs, Buckness University
District 3: Kenneth Gearhart, Poughkeepsie, New York
District 4: Frank Sheridan, Lafayette College
District 5: Charles Turner, N.J. American Basketball
District 6: Richard Ilano, Case Western Reserve University
District 7: Thomas Monfort, Loyola Academy
District 8: Robert Gun, Houston Oilers Football Club
District 9: L.P. “Pow” Dishin, University of New Mexico
District 10: Grady Morgan, Southeastern Louisiana University

Joe Warden, Vanderbilt Uni...
The following individuals will be approved.

Mr. A.O. "D" Duer
Mr. Harold Mundy
Mr. Ronald E. Sayers Miller.

Approved.

The Committee will meet all new requirements as previously outlined.

A motion was made by Mr. Lee and seconded by Mr. Sheridan to accept the above report.

Approved.

The Certification Committee recommended that the number of applicants taking the certification examination be limited to 250 at future national convention sites and 150 at future regional sites will be required. It is requested that the Regional Section President in January, March and August be warranted and that the District Coordinator be the submitter in their respective areas.

A motion was made by Mr. George and seconded by Mr. Lee to accept the above report.

Approved.

XXVII. The American College of Sports Medicine, Section A, Mr. James Dodson was presented. The Committee noted that the A.C.S.M. Athletic Medicine Section meeting each year at the site of the N.C.A.A. meeting. The meeting was informative as we were not gaining what we were not looking for. It was unanimously to attend the annual meeting.

NATA has now made it possible for certified athletic trainers to gain information of their membership. NATA members would become a section of the N.C.A.A. Section if they so desired. The dues will be $50.00 made by Mr. Flentje and seconded by Mr. Melhart to accept the report. Approved.

XXVIII. The American College of Sports Medicine, Section A, Mr. Gary Delforge was represented the NATA for the past five years—1970 in Albuquerque, New Mexico; 1971 in Toronto, Canada; 1972 in Philadelphia, Pennsylvania; 1973 in Chicago, Illinois; and 1974 in Kansas City, Missouri.

In the 1973-74 academic year, the NATA has been represented at the A.C.S.M. Annual Meeting. I have represented the NATA for the past five years—1970 in Albuquerque, New Mexico; 1971 in Toronto, Canada; 1972 in Philadelphia, Pennsylvania; 1973 in Chicago, Illinois; and 1974 in Kansas City, Missouri.

In the 1973-74 academic year, the NATA has been represented at the A.C.S.M. Annual Meeting. I have represented the NATA for the past five years—1970 in Albuquerque, New Mexico; 1971 in Toronto, Canada; 1972 in Philadelphia, Pennsylvania; 1973 in Chicago, Illinois; and 1974 in Kansas City, Missouri.

The liaison report is as follows:

Representative to The American Physical Therapy Association

This year the APTA will have their annual meeting in conjunction with the World Confederation of Physical Therapy. June 28 - July 3.

The Medicine Section of the APTA held their annual meeting in March 12, 1974. This meeting was attended by approximately 25-30 NATA members who were personally invited to this meeting. NATA members who spoke or presented papers at this meeting were: Frank Goeck, Joe O'Toole, Ron Peyton, John Kipper, and Jack Rockwell. All two of the speakers who were not physicians were not NATA members. At the business meeting the following resolution was presented by the NATA officially: they had been serving on a temporary basis.

Ronald Peterson, Chairman
George McClurky, Vice Chairman
Simeon Edwards, Secretary
John Swanson, Treasurer
Bob Gray, Liaison Activity Committee Chairman
Ron Peterson is a NATA member.

ABC was presented. A motion was made by Mr. George and seconded by Mr. Lee to accept the report. Approved.

Board action needed on:

XII. The National Education Association, Mr. Thomas E. Smith to accept the report.

XXVI. The American Medical Association, Committee on Medical Aspects of Sports presented by Mr. Bobby Gunn at the Winter meeting.

XXVII. The American Physical Therapy Association, presented by Mr. Frank George was presented. The liaison report is as follows:

Chairman of the Research and Liaison Committee with the American Academy of Pediatrics, therefore, no report was presented.

XXVIII. The American Physical Therapy Association, therefore, no report was presented.

Board action needed on:

Should the NATA Education Committee develop a questionaire to test NATA members, asking if they would be interested in becoming a student for a five to six week course in the Medical Field or in the American College? This questionaire should include type of profession, if any, experience of some kind, housing arrangement, prerequisites, etc., etc.

A motion was made by Mr. Lewellyn and seconded by Mr. Mr. Sheridan to accept the report.

Approved.

XXIX. The American Physical Therapy Association, Representative to The American Physical Therapy Association.

This year the APTA will have their annual meeting in conjunction with the World Confederation of Physical Therapy. June 28 - July 3.

The Medicine Section of the APTA held their annual meeting in March 12, 1974. This meeting was attended by approximately 25-30 NATA members who were personally invited to this meeting. NATA members who spoke or presented papers at this meeting were: Frank Goeck, Joe O'Toole, Ron Peyton, John Kipper, and Jack Rockwell. All two of the speakers who were not physicians were not NATA members. At the business meeting the following resolution was presented by the NATA officially: they had been serving on a temporary basis.

Ronald Peterson, Chairman
George McClurky, Vice Chairman
Simeon Edwards, Secretary
John Swanson, Treasurer
Bob Gray, Liaison Activity Committee Chairman
Ron Peterson is a NATA member.

ABC was presented. A motion was made by Mr. George and seconded by Mr. Lee to accept the report. Approved.

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A motion was made by Mr. Lewellyn and seconded by Mr. Mr. Sheridan to accept the report.

Approved.
Mr. Kermit Smith of N.C.A.A. Helmets has been presented to the Board of Directors a request from Mr. Mike Ritz, Athletic Trainer, Duke University, that the NATA research a hand cast material. Mr. Smith informed the Board that the NATA research on illegal materials and/or equipment. A motion was made by Mr. George and seconded by Mr. Smith that the NATA research the requested materials. 

Action Approved.

XLII. The National Operating Committee on Standards for Athletic Equipment presented by Mr. Tom Walls is as follows:

The National Operating Committee held its annual board meeting at Wayne State University in Detroit, Michigan, on February 22, 1974. After this meeting, action was taken on the following items:

1. Dr. Hodgson presented his report to the committee at this meeting. The standard that has been developed has been submitted to the appropriate results in all phases of the testing to date. The standard that has been developed has been submitted to the appropriate results in all phases of the testing to date.

2. Dr. Hodgson has requested and received a round-robin testing system as a check of the reliability of their findings. The participants in this system are:
   a) Wayne State Laboratory
   b) The Army Natl Laboratories
   c) Penn State biomechanics laboratories
   d) The University of Delaware, laboratory in Toledo, Ohio.

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   c) Penn State biomechanics laboratories
   d) The University of Delaware, laboratory in Toledo, Ohio.

The remaining six months of 1974 be contracted after funds are obtained; as the Committee felt it could not contract for more money than this without being available. As I stated earlier in our National Athletic Trainers' representative to the United States Olympic Council, Quadrennial and Biennial Meetings and for the 1968 and 1972 Olympic Games, the executive committee of the United States Olympic Committee for the Olympic Games in Mexico City and Los Angeles.

We have always worked very closely with Dr. Hodgson and his committee and help have been invaluable. As I stated earlier in our National Athletic Trainers' representative to the United States Olympic Committee, Quadrennial and Biennial Meetings and for the 1968 and 1972 Olympic Games, the executive committee of the United States Olympic Committee for the Olympic Games in Mexico City and Los Angeles.

After their members make application for these Games, each district again sends a ballot to every member in attendance at the event to vote on their applicants. Each district then formulates a committee to vote on the applicant's qualifications. The final nominees from each district are then sent to me as Chairman of our National Athletic Trainers Association International Games Trainer's Selection Committee. The committee, consisting of myself and four other National Athletic Trainers Association members, will meet at our annual convention in Kansas City in June of 1974 to determine the final selection. This procedure is now being coordinated into this program and is developing a round-robin testing system in Toledo, Ohio.

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Four results have been received from the International Games Selection Committee so far, which have been presented to the Committee. These are:

1. East Carolina University
2. Eastern Illinois University
3. California State University at Fullerton
4. California State University at Northridge

A motion was made by Mr. George and seconded by Mr. Lee to accept the above recommendation.

XLIV. The Professional Education Committee budget request was approved and seconded by Mr. Melhart to accept the above recommendation. 

Action Approved.
A motion was made by Mr. George and seconded by Mr. Sheridan that the Board of Directors prepare a file box for NATA members. A motion was made by Mr. George and seconded by Mr. Sheridan to secure the aid of the Cramer Brothers, the two manufacturers of the old pre-war uniform equipment, to make new uniforms for the organization. This award will be presented in recognition of the contributions made by the Cramer Brothers, the two manufacturers of the old pre-war uniform equipment, to make new uniforms for the organization.

The strength of NATA depends upon how much work and contribution the members make, and how much each and every member in NATA is willing to do.

"I hope you all feel that you have something to contribute and I hope you will know that your suggestions and remarks will all be considered when the Board of Directors in session. I also would like to thank the members who have sent letters and cards and made calls of congratulations at this meeting."

"At times progress may seem slow because a slow, careful procedure is necessary. Federal legislation are progressing at a very good meeting. Sorry I have eye trouble but I have had a good time and when I get out of this hospital I am going to be around, I will be ready to go."

"The greater majority of my life has been devoted to volunteer work. God bless you all."
CXXXII. Dr. Sam Fuenning, representing the American College of Sports Medicine, presented the following names as members of the Associate class, for consideration: Tony Dougal, Boston University; Richard Melhart, Washington State University; Alfred Ortolani, Kansas State University; and Lindsy McLean, University of South Carolina.

CXXXIII. The Board of Directors requested Board action on the following recommendation for the professional education program:

"The National Athletic Trainers Association recommends to the Board of Directors that it adopt the following changes to the professional education program:"
NATA JOURNAL MEMBERSHIP SURVEY

Survey closing date is January 31, 1975. Please do not send in after this date.

Subject: Continuing Education

Please read the letter from your President in this issue of ATHLETIC TRAINING. Also read, “Continuing Education or Obsolescence in Athletic Training” by Bud Miller in the September 1974 issue of ATHLETIC TRAINING before completing the following questionnaire.

Circle appropriate response in left-hand column

A B C D E 1. Membership classification: A. Certified B. Active C. Associate D. Student E. Other (specify)


YES NO 3. Have you read the article “Continuing Education or Obsolescence in Athletic Training” by Bud Miller, ATHLETIC TRAINING, Volume 9, Number 3, September 1974?

YES NO 4. Do you understand what is meant by continuing education?

YES NO 5. Are you aware that beginning January 1976 to maintain NATA certification or associate membership all members must satisfy the continuing education requirement?

YES NO 6. Do you feel you will be able to obtain nine (9) continuing education units every three years?

YES NO 7. Do you feel the NATA should require its members to meet a continuing education requirement in order to maintain certification?

YES NO 8. Do you feel as a member you have received sufficient information on continuing education?

&. List activities that you feel should be dropped or added to the continuing education program. Place a (D) in front of those that should be dropped and an (A) for those that should be added:

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10. Please list below continuing education activities and units that you earned from January 1, 1974 to December 31, 1974:

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ATHLETIC TRAINING - Volume 9 - Number 4 - December 1974
HEAT VS. COLD THERAPY FOR THE TREATMENT OF MUSCLE INJURIES

The author was born on November 11, 1948 in Clifton Springs, New York. He received his primary and secondary education in Geneva, New York. From 1967-1971 the author attended Brown University where he received a Bachelor of Arts Cum Laude with a major in Political Science. In 1971 the author joined the Physiology Department of the University of Rochester. He received his Master of Science degree in November 1973. Currently the author is working towards his doctorate in Physiology.

Assume that part of the 13% increase was a result of increasing the muscle metabolism. It follows then that muscle blood flow should also increase.

Roddie et al. (6) measured blood oxygen content from a deep vein draining the muscles of the forearm and from a superficial vein which serves the skin vessels during body heating. When the participants were subjected to the heat stress, the total forearm blood flow increased. Concomitant with the increase in blood flow was a rise in oxygen content of the superficial venous blood towards arterial blood. These results indicate that with a constant or slightly increased metabolic rate and increased blood flow less oxygen is extracted per unit volume of blood. Meanwhile the oxygen content of the deep venous blood rose only slightly. These measurements indicate that the greatest proportion of the increased blood flow passed through the non-nutrient vessels of the skin. The average value of the blood flow increase through the muscles of the forearm was 10%. From these experiments and those by Craig it can be assumed that heat therapy can increase muscle blood flow by 10-13%.

Cold has also been shown to increase muscle blood flow. Pappenheimer et al. (5) cooled arterial blood from 40°C (104°F) to 5°C (41°F) in cat hindlimb. Below 25°C (77°F) blood flow to the muscle increased progressively. Between 5 and 10°C (41 and 50°F) the muscle blood flow was greater than that at 40°C (104°F). Barcroft and Edholm (1) recorded deep muscle temperatures of 20°C (68°F) with the arm cooling in a 12°C (54 3/5°F) water bath. Therefore, one would expect the deep muscle temperature to be decreased further after ice treatment, and with each degree decrease a corresponding increase in blood flow through the muscle. (5).

From the evidence presented it would seem that both cold and heat can increase muscle blood flow, but it is suggested that cold may have the greater effect. To see why, one must recall that the best method of increasing muscle blood flow is by increasing the muscle metabolism, and the best means of increasing muscle metabolism is by exercise.

Cold has an anesthetic property, i.e. cold can dull peripheral pain sensations. Therefore, immediately after cold therapy (ice for 30 min.) an injured muscle will not feel as "sore" as before treatment. This anesthetic property then allows the muscle to be used in light exercise. Light exercise increases whole body metabolism 300% and this increase will be reflected by a rise in muscle metabolism. From the previous discussion it should be evident that this increase in muscle metabolism will result in increased blood flow and at a greater rate than with either heat or cold. Therefore, compared to heat therapy, cold is seen to provide a second means of increasing blood flow.

In conclusion it should be emphasized that for muscle injuries cold facilitates increased blood flow via two mechanisms. The first method being by cold vasodilatation and secondly, by allowing usage of the injured muscle. These two processes have a greater effect on increasing muscle blood flow than does heat. By allowing muscle usage cold eliminates the problems of disuse atrophy and muscle weakness which may result if the injury warrants prolonged inactivity.

BIBLIOGRAPHY

COLD THERAPY

The prime responsibility of any athletic trainer should be the prevention of athletic injuries. An old axiom in athletic training states "it is much easier to prevent an injury than it is to treat one." Unfortunately, even after the best of efforts by the coach, athlete, equipment personnel, physician, and athletic trainer to prevent injury, accidents do happen. Among the athlete’s "Bihof Rights" is the right to competent treatment of athletic injuries and the safe return to athletic participation. The competent physician and athletic trainer are always seeking treatment methods and procedures that will aid the injured athlete in returning safely and as soon as practical to full participation. Many methods, techniques, procedures, and devices have been developed over the years to help those individuals charged with the responsibility of the safe and rapid return to participation by the injured athlete. Within the past 10 years much has been written and many clinic and workshop presentations made about the use of cold as a therapeutic modality. The use of cold (ice therapy, cryotherapy, cryokinetics) in combination with exercise has become an accepted method of treating common athletic injuries such as sprains and strains. The writer has collected a bibliography of over 300 articles investigating the clinical and physiological effects of cold. Without burdening the student trainers with vast amounts of technical jargon and an extensive amount of quotes from the above-mentioned studies, the writer would like to present a rationale for the adoption of the technique of treating athletic injuries with the use of cold and exercise by the high school student trainer.

In varying degrees, depending upon the severity of the injury, athletic injuries can be classified into four stages: trauma, hematoma formation, hematoma absorption, and healing by scar tissue. Trauma, the injury itself, can be any of a number of problems such as sprains, strains, contusions, lacerations, dislocations, subluxations, fractures, et cetera. The trainer’s role regarding trauma is prevention. Common preventive considerations include certain wrapping and taping procedures, warm-up activities, pre, post, and in-season conditioning programs, inspection of facilities and equipment, properly fitted equipment, comprehensive medical examinations, proper coaching techniques, and many more routine procedures all designed to prevent athletic injury. If an injury occurs despite all efforts to prevent it, the second stage of an athletic injury, hematoma formation (hemorrhage or bleeding), must be considered. This stage could be called the "first aid" stage where treatment consists of (I.C.E.), ice or cold...
applications, compression (usually in the form of an elastic wrap), and elevation. This stage may last anywhere from a few minutes to 48 hours or more depending on factors such as the severity of the injury, promptness in applying I.C.E., and the length of time expired between the initial injury and the control of the resulting hemorrhage.

The third stage, hematoma absorption, involves the use of some form of therapy to break up and absorb the hematoma which has formed. To clarify the term “hematoma,” a visual example of a common hematoma formation is a contusion, or more commonly called a bruise or black and blue mark. Many types of therapeutic modalities are available to the athletic trainer to aid in the promotion of blood flow to absorb the hematoma. Typical of these modalities are the whirlpool baths, steam packs, diathermy, ultrasound, counterirritant ointments, and massage. While there are many other modalities, it should be understood that the essential function of all is the promotion of circulation for the purposes of breaking up and carrying away the hematoma and bringing the nutrients essential for healing damaged tissue at the injury site.

Numerous research studies and articles have illustrated that promotion of blood flow to an area of the body is also possible by the application of cold. While this may seem contrary to the belief that cooling an area causes the blood vessels to constrict and thereby reduce blood flow in that area (a situation desirable during the hematoma formation stage), a phenomenon known as “cold vasodilatation” occurs after the source of cold is removed. Have you ever come in from the outside in very cold weather and felt your ears become very warm? Have you made snowballs with your bare hands and then gone inside to warm yourself and found your palms reddened and very warm? If you have, congratulations, you’ve experienced “cold vasodilatation.”

Studies indicate that blood flow to a treated part after the application of cold can be increased above what it is under normal environmental conditions for a period lasting upwards of three hours. During the application of cold the blood flow to the tissues is decreased, but after the cold source is removed, there is the increase in blood flow to that part (cold vasodilatation). Without going into an extremely detailed physiological explanation, based upon the literature available, we can accept the above statements as proof that blood flow to a treated part can be increased through the application of cold.

The three most common techniques of cold application are: ice massage (ice cubes or water frozen in paper cups), cold packs (towels or plastic bags filled with ice), and an ice bath (a pillow, pan, whirlpool, or other container filled with ice and cold water). Many physiological variables enter into the preferred length of time for treatment, but effective cold vasodilatation has been noted after each of the following types of cold application: ice massage on, above, below, and either side of the injured area for a period of from five to seven minutes; application of an ice pack of sufficient size to cover an area slightly larger than the injured area for a period of 20 minutes; immersion of the injured part in an ice bath (36°-40°F) for one to three minutes (excellent technique for providing an even distribution of cold to a bony, irregular shaped area such as the ankle joint).

Healing by scar tissue, fibroplastic formation, is the fourth stage of an athletic injury. Next to preventing injury, the trainer’s function involving this fourth stage should be considered a prime responsibility. Application of some form of therapeutic modality to increase blood flow is considered standard procedure in helping an athletic injury heal. Restrictive taping, wrapping, padding, or other such procedures are considered necessary to prevent aggravation to the injured part. Unfortunately, the application of a therapeutic modality followed by some form of restriction all too often concludes the treatment procedure followed in caring for an athletic injury. Promoting circulation to a part and restricting its use may allow the injured area to heal, but nothing was done to make the part stronger. As trainers, the only way we can increase the strength of an area is by strengthening the muscles which cross the injured area. Alienation of the injured part through use of a cast, crutches, tape, or such defense mechanisms as walking with a limp, will cause muscle atrophy (wasting away) about the injured area thereby weakening the part and making it prone to re-injury once the athlete is returned to participation. A program of exercises specific in nature for the muscles involved in the injured area must be followed based upon sound principles of anatomy and kinesiology for the purposes of developing strength, flexibility, and joint range-of-motion. The second phase of cryotherapy, or cold therapy, that which immediately follows the application of cold, is exercise. In addition to increasing strength, flexibility, and joint range-of-motion, exercise helps prevent the build-up of adhesions which are fibrotic structures which are formed in and around muscle, tendon, and ligamentous tissue following trauma and are responsible for much of the disability of an athlete following injuries such as sprains, strains, dislocations, and fractures. Active exercise helps prevent these adhesions from forming by increasing local blood flow and stretching the scar tissue.

Exercise techniques used following the cold application are performed actively by the athlete through his or her pain-free range-of-motion. Pain is nature’s alarm system and it should not be ignored during exercises for fear that we could do further damage to the already injured tissues. The rotatory components and the range-of-motion, depending upon the tolerance of the athlete, of the joints and muscle groups are stressed in each exercise routine. Progressive resistive exercises are not initiated until the athlete exhibits full range-of-motion of the injured area.

Several advantages of cold therapy are evident particularly for the student trainer. Compared to other modalities, the application of cold is an extremely safe form of therapy. While it is possible to cause damage to the skin using chemical coolants, it is extremely unlikely that damage will occur using the massage, pack, or bath techniques. Another advantage is the cost. From an economical standpoint, cold therapy is very inexpensive. A used refrigerator, either donated or purchased in a second-hand or junk yard, water, electricity, and paper cups or re-usable metal cans provide a ready supply of ice. Once the athlete has received instruction in the proper application of the cold source and has been given the basic principles of the exercise techniques, the self-application advantage of cold therapy is very evident. Treatment at home, on the road, and at times convenient to the athlete for self-treatment provide the trainer with additional time to care for more individuals.

It is the writer’s opinion that much of the success attributed to cold therapy must be credited to the use of proper exercise techniques. The offset of atrophy and reduction of adhesions following injury achieved through exercise result in an early return to athletic participation on a more permanent basis. To promote healing and prevent aggravation to an injury is not enough. The qualified trainer realizes that strengthening the part through exercise will return the athlete to full participation sooner and will reduce the likelihood of re-injury.
have had the opportunity to read Naked Ape by Desmond Morris, but I would certainly recommend it strongly to anyone who wishes to know more about himself and the world he lives in.

There are many who see man as basically a real nice creature if all of his needs could be met. That fundamentally, man is a “good guy,” only having problems because of social deprivations. According to this concept, it is slums, lack of work opportunities, prejudice, discrimination, poverty and lack of more principled living that makes bad people, that really people are good if given a chance.

I personally don’t believe that for a minute. I may have a somewhat old fashioned “religious” view of the “sinful” nature of man, but I sincerely believe it is an honest view. There is an old saying that selfishness, greed and lust are gifts of nature, but generosity, selflessness and love are accomplishments. These are the things we have to work at so very hard or we will lose the very thin, but very necessary “veneer of civilization” that we do have. This view I am presenting may help us develop more tolerance and understanding, but I am only hoping we can weave this back and relate it to the importance of sports in this process.

When a newborn baby enters this world he or she is a bundle of energy directed toward being relieved of its tension. This relief will follow feeding, being held, kept warm, comfortable and is then followed by sleep. As the need for gratification is overwhelming to the baby, any frustration is met by rage. Gradually the infant perceives others about him, first as shadows, then as a smile, a caress, or on occasions a stiff and unfriendly manner.

Upon this slowly emerging figure of his parents, he now will focus his unsatiable grasping, sucking, devouring wishes and his totally destructive rages. Very little evidence of the noble nature of man is seen here.

As his awareness of the “not me” world becomes more mature, he learns that his demands may be met more completely if he is willing to compromise. Smiling at mother in response to her smile, not throwing dishes on the floor, and agreeing to a time and place for bowel movements result in a new kind of pleasure in approval and love from parents. Failure will result in an angry look, physical punishment, or withdrawal of love. The child learns to delay his demand for immediate pleasure for the sake of a long range pleasure. The child can plan ahead and realize the consequences of doing what he would really like to do.

A more mature aspect of control begins its development around the age of four. Because a child’s internal wishes are so destructive and self-gratifying, he is in ever-present danger of bringing the wrath of his powerful parents down upon him. To aid himself in the struggle to control his impulses, the child forms a strong identification with his parents’ rules of living, saying, “These are now my rules also.” It is almost like the parents’ voices now being in the child’s mind, the voice of conscience. This voice can be so terrible in its punishment—usually more harsh than the parents themselves—that the demand for conformity and forsaking of impulsive pleasures is powerful.

When we observe the “civilized” product of this struggle, we may not remember what devouring, possessive and destructive urges remain under tight control. In fact our not remembering is actually a part of the control itself. Most humans will purposefully not be aware of these negative feelings and will recall “the happy days of childhood.” Many times these were really days of terror from dangers within and without, interspersed with those good days of transcendental joy. As we observe children we are often struck by their up and down moods, their night terrors, nightmares, prolonged weeping spells, their sudden giving into parental punishment to be given proof of love and at other times their persistent sudden defiance, as if to give in would mean to lose their own separateness from the parents.

To assist in maintaining control over our infantile strivings, certain social institutions have been developed. These can be divided generally into those that control by inhibition and those that control by partial gratification.

The former are the most obvious as controls. Our police, the laws, and the courts represent the “you cannot” controls. They could be an extension of the earlier controls of the parent over the child. Here the certainty of immediate punishment is essential. One could view our judicial system as a moral drama. The lesson here is if you break a rule you should expect immedi-
ate pain. We have to be careful and not attempt to be too considerate of the rule-breaker for fear we may weaken the impact of this drama.

In addition there is the system of “you should not” controls. This is an extension of “the voice of conscience” of the parents. Breaking these rules may not cause immediate pain or incarceration, but may be associated with a fear of loss of love. The importance of religious faith, political beliefs and the ideas of what is generally “the right thing” to do enter in. These two systems can get in conflict and cause anxiety.

Now we turn to the control systems based on partial gratification. I imagine every man has his price. The church elder devoted to a life of upstanding citizenship may forget to count one of those swings in a sand trap—if he was sure no one saw it. Partial gratification is a type of bribery. It is easier for me to deny my basic animal desires if I am allowed to give vent to them in a small way, especially since I can erect a way of aggressive and sadistic imitations of the “you should not” controls. This is an exceptionistic way of partial gratification. How can one of those swings in a sand trap—if he was sure no one saw it.

In the field of entertainment we find a form of partial gratification. How popular are war stories (Patton!), stories of grand adventure, the surmounting of great obstacles, and how contrasted these are with most of our daily drab routines of existence. These vicarious pleasures are enjoyed by most humans.

Sports do provide an exceptional opportunity for expression in a limited way of aggressive and sadistic impulses. Different sports will satisfy different personalities depending upon their feelings. For the more openly aggressive person, direct competition in a physical contact sport provides a health saving outlet. For some this will be directed at one opponent, where the object of rage is obvious and win versus lose is apparent. Others will prefer a more anonymous sport such as football or basketball where the target may be one of several people and the win-lose factor is diffused over the entire team. Still others prefer to maintain more “civilization” over their naked aggression and will be inclined to more “gentlemen’s type” games like tennis or golf.

When children are left to themselves and finish playing “war,” they will many times play competitive sports, but they will know when they have had enough and go from this type competitive play to cooperative type play activities. This is a possible danger in over-organizing the younger children into competitive teams. Very quickly you will see the parents wishes for how much is enough interposed on to the children and many little league boys are burned out or bored by mid-season or sooner. Especially at the younger ages the parents and coaches are almost always much more concerned with winning than the kids are.

At puberty and adolescence however this problem will diminish if the boy is still around and interested. At this age sports can also act as a valuable escape outlet for frightening and confusing sexual aggression.

As we grow older the spectators can enjoy the “animal delight” of competition by watching his favorite linebacker “red dog” or his favorite hockey player slam someone with a body check. We do gain release and get vicarious satisfactions this way. If you doubt our basic “animal desires” go to a boxing match and observe the spectators scream for blood. The “animal” is out in the open for a short while and even in certain situations spectators can get so carried away they will actually do battle and riot in the stands as we have seen in England and South America as well as in certain basketball games in the U.S.

Of what psychological importance is all this? Our mental stability as individuals and as a nation requires a frank appraisal of what we are really like. By so doing we can learn to accept ourselves and accept others by recognizing the compromises we all must make to enable us to get along and exist with each other. Sports, particularly to participants when younger and to spectators when older, provide us with a necessary “bribe” to our unconscious aggressive desires. We are satisfied for the moment and can turn to more productive and creative pursuits. The individual who doesn’t use sports this way will have to expend greater amounts of his energies to maintain control over himself; wasted energy in a sense that could be put to more useful activities. I think we need sports for socialization as well as to maintain our “veneer of civilization.” As thin as it is, we need all the help we can get.

To go from this rather deep and more serious vein I want to move to a lighter and equally fascinating explanation into some of the superstitions and myths that come along with sports and sports figures. From here on I will sort of ramble. There are probably more of these superstitions among baseball players than any other group, but almost every sport or sportsman can give you some interesting insights into how the human being operates at this level of conduct; for instance: You never put the bats away until the very last out.

On the way to the ball park if a player finds a hair pin, it is a sure hit that day.

If a player sees a white horse on the way to the game it is also good for a hit.

If a player sees a pregnant woman on the way to the game, that is good for a home run.

Willy Mays never goes to center field without touching second base.

The pitcher always gets the ball from the third baseman. Why?

Babe Ruth always took short choppy steps because he felt long strides slowed you down. Also he had a “magic” eye wash he kept locked in his locker at all times and would put into his eyes before playing. One time one of his team mates dumped out the drops and just put in tap water, but waited for three or four days to tell him because he didn’t know how the other did. Ruth took after him with a bat.

A four leaf clover will bring any sportsman good luck.

Never step on a chalk line going to the field or coming off the field—bad luck for sure.

John McGraw was very superstitious when he had the Giants. They wore black uniforms for luck as he was told to do by a man named Charley “Victory” Feltz, who came to him one day and told McGraw that if he didn’t take him along on the squad McGraw would lose. He carried “Victory” Feltz with the team at home and away for four years. And the Giants did win the pennant all four years. Feltz died and the Giants didn’t win and in fact, lost the pennant that very next year.

There is no end to the superstitions about clothes. When Adolph Rupp was on a winning streak he always wore a brown suit. In fact he became known as the “man in the brown suit.” You never put a hat or a cap on a bed, bound to lose if you do that.

Mr. Henry Iba at Oklahoma State says you find a penny and the head is up, you are going to have good luck. Also before every tough game he used to flip a coin and if it came up heads he knew he would win and have a good night, if it came up tails, he knew it would be close and be a hard-fought battle.

Also if he had a winning streak he would do everything the same, eat the same thing, at the same time, go to the gym at the same time, warm up at the same time, go in at the same time and follow the exact ritual. When Mr. Iba coached in high school he had a certain tree he always walked under on his way to the gym. He says he wouldn’t think of going to a game there without walking under that tree. In the 1940’s,
Mr. Iba had a winning streak going and he wore the same green suit week in and week out. Mr. Iba says, “I’d rather be lucky than smart.”

Black cats are bad news to some sports buffs.

Never walk under a ladder if you are going to be competing, cause it will bring bad luck.

At Oklahoma State University, wrestling is a big sport, young wrestlers say they never sleep any way but on their stomach—you get pinned on your back.

Hockey players always go by and hit the goalie on the leg with their stick before a game starts.

Bowl players will have various rituals they go through—one always blows in his thumb hole before bowling. You should never pick up your ball with your fingers or thumbs in the holes, wait til you get the ball up to belt or chest level.

Some players would never change a shoestring during the season. I saw one guy with 10 knots in his shoestring.

Otis Wile, retired sports information director at Oklahoma State University always puts his left foot in the sox first then the left shoe on first and left leg of his pants on first. He was told this was good luck 50 years ago and he hasn’t changed since. Otis used to travel with O.S.U. to the N.I.T. and in 1946 he was walking in snow in New York on the way to Madison Square Garden and found a penny. Mr. Iba said put that penny in your left shoe and, you guessed it, Utah won.

In the early days of the Texas league they called it the “square cap league,” because so many pitchers threw at the heads and they didn’t have hard hats in those days, so with all the “knobs” on the corners of their heads, the players had to get square caps so they would fit the contour of their heads.

When we had a player down in Texas back in those days named John King who hit around .500 off of right handers and around .100 off of left handers—he hated left handers with a passion. He is quoted as saying 22,000 left handers—he really did hate left handers.

Our former baseball coach, Toby Green, was always given a dandellion before each game by his wife who would sit in the dugout the day of the game either. Once there was a minor league hitter who was on a home game stand and made love to his wife every night before going to play and he got on a consecutive game hitting streak. He made her travel to the next towns on the road trip so he could keep up his consecutive game hitting streak. It finally ran out at the end of three weeks when he could hardly lift the bat to his shoulders.

Many ball players put the glove in exactly the same place between innings and some will lay it in a special way—palm up, palm down, folded on its side, flattened out and in even certain areas of the dugout or playing field.

Al Rosen always worked an “X” in the dirt on the opposite side of home plate before he batted. He used the big end in his hand and marked the “X” with the small end of the bat.

One year Denny Litwhiler was batting over .400 late in July when another player ran up to his back, placed both hands at his shoulders and made a quick rub toward the ground and told Denny he had just rubbed off his luck. Denny then went 0 for 18 the next 18 times at bat—the other guy started a long standing hitting streak.

In golf Gary Player always wears black. Some golfers always drive to the course in exactly the same way, always following the same streets and not going on another street except the ones traveled the first time.

We had a basketball player that came to us from Kentucky by the name of Gary Hassman, who brought along an old towel from his high school days that whenever he was on the bench he would sit with it over his head and peek out to watch the game—sort of like a security blanket.

When Dicker Soergel was our star quarterback in the late ’50’s and the team went out to warm up he always wanted to throw that first pass to the same man every week.

Phil Lentz of the New York Yankees feels he can run faster in real tight clothes. Joe Pepitone feels his clothes have to be skin tight or he can’t play well, hit well or run well.

Jim Bouton states he had to be scared to pitch well and that even back in high school he would have to make up stories and use fantasy so he could get fired up enough to pitch well.

When things are going well most coaches won’t change a thing. Don Parham who is a baseball coach at Southeastern in Oklahoma wouldn’t change his underwear when a winning streak was going. He did wash it out by hand each night, but wouldn’t think of wearing any other underwear.

One coach in Oconto, Wisconsin won’t let anyone turn on the light in his office—if the janitor or anyone forgets and he notices he runs in and turns it on and makes it clear everyone has to leave that office light on whether the game is at home or away.

In De Forest, Wisconsin, they have a wrestling uniform that has been to the state finals three years in a row and already, the poor faded uniforms are being fought over who gets to wear them next year.

Many athletes would never let their uniform go into a machine. They want it washed out by hand. If it is done in a machine they will lose.

One of the wildest stories I have heard occurred to a collegiate wrestling team from Iowa State back in the 1930’s that was on an eastern road trip to wrestle Rochester University, Syracuse University and West Point on a Thursday, Friday and Saturday night all in a row. They won the Rochester meet so as a group they decided not to take showers until they lost, they all won again at Syracuse the next night, so again no showers. On the third night at West Point they had seven out of eight pins because the West Point boys wanted off the mat and away from them because they smelled so bad. Never had thought of using B.O. as a weapon in wrestling.

The stories could probably go on forever and I know all of you have your own personal superstitions and practices. Really sub-consciously there may be a reason for all of this and all superstitions bring into operation a concept called “self fulfilling prophecy.” If the person allows himself to believe too deeply in these myths and superstitions when put to a test or put to competition without doing that which is believed, he will fail just to prove the superstition correct.

To what extent this works is not always known. I do have a closing story that probably demonstrates about as well as possible the real truth in all of this.

It seems a man was at the prize fights seated next to a priest. One of the fighters crossed himself in his corner before he came out at the beginning of the round so the man turned to the priest and asked “Does that really help, Father?” The priest answered back, “It does if you’re a damn good fighter!!”
Guide to Contributors

The editor of Athletic Training, the Journal of the National Athletic Trainers Association, welcomes the submission or 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 8 1/2 x 11 inch typing paper, triple-spaced with one inch margins.

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

3. The list of references should be as follows: a) books: author, title, publisher with city and state of publication, year; b) articles: family names and initials of all authors, title of authors, title of article, journal title (abbreviations accepted as per Index Medicus), volume, page, year.

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

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Unused manuscripts will be returned, when accompanied by a stamped, self-addressed envelope.

Address all manuscripts to:

Clinton Thompson
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Michigan State University
East Lansing, Michigan 48823
Most athletic trainers today would agree that there is a crucial need for valid data on athletic injuries. Because of this, in the future the athletic trainer will be called upon frequently to provide the researcher with specific and detailed information concerning athletic injuries. Although accurate record-keeping is a difficult task it is necessary it be done for insurance reasons, protection against civil suits and criminal actions, and/or to keep abreast of the individual athletes' progress while he is injured. However, because of lack of time the trainer usually records only the bare minimum facts. If athletic trainers are going to provide data that will enable researchers to make sports safer, then they must be more efficient and complete in their recordkeeping.

With this in mind, Northern Illinois University instigated research into finding a more effective method of compiling athletic injury data. It was thought that a standardized reporting system would enable the trainer to have adequate records and also enable him to compile injury data banks. After having wrestled with this problem for about five years, Northern's staff has produced an effective and easy method for compiling injury information by the use of a computerized athletic injury reporting system.

The process of collecting and breaking down data is a mundane task which is very time consuming if attempted manually. However, the computer can and will perform this analysis with extreme accuracy and unbelievable speed. The trainer and his staff no longer will need to spend many hours of manual processing to produce reports of their activities. As stated before; these manual reports, at best, just scratched the surface of producing useful information. The use of the computer in the analysis process will allow a greater number of data items to be considered and yet require less personnel time to analyze them.

The procedure used at Northern Illinois University this past year and adopted as a pilot study in a modified form by eight universities in the Mid-American Conference is based on the collection of injury data through the use of an optical mark sense readable sheet. (OMR) (See Figures #1 and #2.) This sheet is used in the training room and data is collected for each athlete requiring the trainer's attention. The sheet is filled in on both sides by using a number two soft lead pencil and takes approximately two minutes to complete. Specific data items collected about the injury can be seen by looking at figures one and two. Side one of the sheet contains the classification of the injury, anatomical position of the injury, tissue involved, type of treatment required, body part involved, etc. Side two contains such items as the sport the athlete is involved in at the time of the injury, playing surface, days lost from practice, examined by, surface conditions, weather conditions, player position, etc. In addition, there are two items on each side of the sheet that are unrelated to the injury itself, but absolutely required to machine process the sheets. These two items are the athlete's social security number and the injury number which is merely a sequence number denoting how many injuries the individual athlete has.
acquired throughout the entire year. Each of these two elements is of use on its own, but is required on both sides of the sheet to insure the mechanical process of matching the information on the two sides of the collection sheet into a single machine processible record.

It is obvious by looking at the sheet that the process of recording the data is not an insignificant task. And indeed, a good bit of the time formerly spent on reducing injury data manually can be used now in recording the data on the collection sheet. There are probably several justifications and rationalizations for reinvesting this time. First of all, the sheet has the capability of recording a significantly larger number of data items than are recorded under a manual system. The more data collected, obviously the more depth of analysis on injuries and their treatments is possible. The time spent coding the collection sheets is spread throughout the entire season whereas the manual compilation of an injury report at the end of the season would concentrate a great deal of time within a few days or weeks. Also, after using the collection sheets for several weeks, the process of recording then becomes increasingly faster and easier.

After the sheets are completed, analysis of data contained on the sheets requires several steps by the computer. These steps are: (1) Processing of completed forms through the OMR reading device and converting the data to computer processible form. (2) The execution of several computer programs which match the two sides of the injury form’s data produced in the previous step and the creation of a single computer record for each injury sheet. (3) One or more computer runs to analyze the records produced through a generalized statistical package.

Specifically, Northern Illinois University uses a digits 100 OMR mark sense reader with a magnetic tape unit to record the data in machine readable form. A utility program is then used to order the records for each side of the sheet in social security and injury number order. A Fortran program is then run to combine the records for each side of the sheet and will produce an error report for the sheets which do not have matching sides.

The statistical package for the social sciences (SPSS) is then used by the computer to break the data into usable information. SPSS is very convenient to use in that very little computer expertise is necessary in its uses. With two or three hours of training anyone can learn enough about the SPSS program to set up the control cards for any analysis that may be of assistance to the trainer. The ability of SPSS to combine data elements in cross-tabulating is just one of the more popular uses for “taking a picture” of the injury data. An example of the kinds of reports available might be a cross-tabulation of injuries by sport and of how the injury occurred cross-tabulated with the days of the week.

It will be possible to collect all of this data and to save a complete injury file for each competition year. With this then an individual injury profile can be produced for each athlete at the end of his eligibility, showing each injury and treatment of the injury from his first practice through his last game. This will be of immeasurable assistance in helping the trainer to advise professional scouts about a player.

In addition, it is entirely conceivable that the availability of this data can lead to some very significant research into the study and prevention of athletic injuries. Should the collection and synthesis of this data help in reducing the quantity and severity of athletic injuries, it certainly will have been worth the investment of time and energy involved in its implementation.
by James Rankin

James Rankin earned his Bachelor of Science in Education at the University of Michigan in 1972 with a double major in physical education and English. He then earned his Master of Science at Western Michigan University in 1974 in physical education. He is currently working on his doctorate at Michigan State University.

By nature athletes are more conscious of the physical state of their bodies and general health than most non-athletes. As the pressure to win mounts on an athlete, he seeks ways to improve his performance. It seems every major or minor medical problem today involves drug therapy. The work of Kochakian and Murlin (26) in 1935 began the use of steroids for their anabolic effect. Papanicolaou and Falk (30) demonstrated the anabolic effect of androgenic hormones in their study in 1938 concerning the role of androgens in the hypertrophy of the temporal muscle in guinea pigs. Strength shows a very high correlation with muscle girth when the sample consists of well conditioned, non-obese young men. (14) It is only logical that athletes, when confronted with a substance which has the potential to add bulk and strength, will use that substance until they see a valid reason not to use it.

Medical Uses, Side Effects, and Related Evidence

The term anabolic steroid literally means body building hormone. Anabolic steroids are derivatives of testosterone, the male sex hormone. Testosterone also has very important androgenic or sexual function in the body. The anabolic function refers to constructive metabolism in the normal pattern of male muscular development. Among the most commonly used steroids are Dianabol, Durabolin, Decadurabolin, Maxibolin, Anavar, Nilevar, and Winstrol. (19) Most athletes who use the drug have been told the androgenic effects have been eliminated, a fallacy even the drug companies admit is not possible currently. (19)

Anabolic steroids are used clinically for treatment of patients recovering from surgery, for treatment of osteoporosis, fracture healing, severe burns, muscular dystrophy, protein tissue building, and myotrophism. (24) They have also been used to treat protein deficiency associated with chronic tumors, after irradiation, to treat diseases of the skeleton, disease of musculature, diseases of the kidney, diabetic retinopathy, hyperthyroidism, diseases of the heart, diseases of the liver, diseases of the blood, and dwarfism in children. (21) Anabolic agents are also credited with having an important effect on stimulating the appetite and imparting a feeling of well being. (24) Clinical and therapeutic use does not include normal, healthy human beings.

The major problem in the use of anabolic steroids is the side effects. Some of the side effects attributed to steroids are as follows: disturbance of the excretory function of the liver, (27) a possible link with hepatocellular carcinoma, (23) virilization in women including the growth of facial and chest hair, (6) and a deepening of the voice to a level normally associated with men (which according to Brodnitz is not reversible), (10) virilization in children including in males phallic enlargement, (8) in females clitoral enlargement, (6) and in both sexes premature closure of the long bone epiphyseal centers, (5) acne, (6) in adult males testicular atrophy due to feedback inhibition of gonadotropin secretion, (8) increase or decrease in libido, (6) and low back pain. (24)

Freed (18) conducted a study of ten experienced weight lifters over six weeks in which five took 5 mg of Dianabol (low dose-LD) daily and five took 25 mg (high dose-HD) daily. The subjects were examined at two week intervals. Eight experienced an increase in blood pressure (one LD went from 120/70 to 160/90), one experienced some prostate problem (HD), two experienced acne (one HD and one LD), one experienced an increase in blood pressure (one LD), one experienced an increase in alanine transaminase six times normal (HD), one experienced a decrease in libido (HD), and four experienced dizziness, headache, faintness or lethargy or both (three HD and one LD). All of these side effects disappeared after cessation of the drug.

Bullock and his co-workers (11) showed that catabolic (causing destructive metabolism) steroids fostered amino acid depletion and anabolic steroids fostered increased amino acid incorporation by muscle tissue. Greene (21) induced growth in undersized boys with anabolic steroids ... in another study (22 he concluded that it is incorrect to say that long bone epiphyses fuse prematurely due to doses of methyltestosterone and/or Dianabol. Verdy (34) observed no significant difference in blood lipids in a study of twenty men on Dianabol (mean age 69 years). Albanese (1)
developed a steroid-protein activity index for eleven anabolic steroids and seven catabolic steroids. Wewalke (37) stated Dianabol was the most efficient anabolic steroid in managing six chronic wasting diseases. Barnes (7) used Mesterolone to treat hypogonadal patients. He noted an increase in hair growth and a decrease in apathy, but also a decrease in testosterone production in three of nine patients in the study. In the other six patients the testosterone level remained the same, but the treatment did not combat infertility. Gogate (20) used Norbolethone to treat sixteen boys and sixteen girls suffering from dwarfism. Over two and one-half years the boys experienced a mean height increase of 3.25 in and the girls experienced a mean height increase of 3.16 in with no side effects.

The Russians introduced the sporting world to anabolic steroids sometime around 1954-56. (35) Drugs are used medically for three basic reasons: to cure, to control, and to comfort. The use of steroids by athletes introduces a fourth reason: to improve. Once improvement is noted the athlete will usually stay on the drug so he will not return to his former, lesser self. According to professional football player John Brodie, "Drugs have the effect of lessening self confidence among players who use them ... before long, as you throw well and win games (with them) ... you think you can't perform as well without them." (15) Weight lifter Randy Starr stated another reason for steroid usage. "We are usually a long way behind the Russians in drug use. They make a scientific study of it. If they come up with something good, their teams all get it. Here, it is a hit and miss thing." (19) Europeans believe the same thing about American athletes, however, since American athletes come from "the land of the towering pill factories," (19) and are thus most assuredly the most doped athletes in the world. It is a vicious circle no one will break for fear the other side will keep on using the drugs.

Studies Relating to Strenghht and Athletes

The two most cited studies, one pro and one con, regarding use of anabolic steroids in the sporting world are the study by Johnson and O'Shea (25) and the study by Fowler and co-workers (16). The O'Shea study (25) involved twelve matched pairs of subjects according to age, size, and strength, one subject per pair on 5 mg of Dianabol twice daily and the other subject on no steroid or placebo. The group was trained for six weeks before steroid use was begun. The steroid use was for a period of three weeks. Throughout the study all subjects received protein supplements to their diet. O'Shea noted significant strength gain, a mean weight gain of 2.48 kg, no change in skinfold thickness, an increase in oxygen uptake and an increase in nitrogen retention. This study has been criticized for two major reasons: first, the Astrand method of measuring oxygen uptake was used, a method of proven low reliability, (17) and second, the sample was invalid since all subjects knew they were or were not taking the steroid in advance which introduces outside the factors that cannot be controlled. (35) O'Shea has repeated essentially the same study using the double blind design with essentially the same results as the previous study. (29)

Fowler and his co-workers (16) studied forty-seven men during a sixteen week period. Eight received a placebo, nine received the steroid, Nibal, fifteen received a placebo and an exercise program, and fifteen received the steroid and an exercise program. Fowler noted no significant differences in strength, motor performance, or physical work capacity between the control group and the steroid group. Of the forty-seven subjects, ten were rugby players (athletes) and thirty-seven were untrained college students. The exercise program consisted of enrolling the subjects in a conditioning class for general physical education students meeting five days a week, thirty minutes a day. There was a noticeable gain in weight which Fowler attributed to increased water retention. This study has also been criticized for two major reasons: first, the steroid was withdrawn from the market in 1968 (12) and second, the exercise load was far too light to produce any marked increases in strength. (17,35)

A study by Ariel and Saville (4) showed that a placebo can give the same effect as taking a steroid. In this study fifteen subjects began training and six were randomly selected to continue. These six were told they would be given the anabolic steroid, Dianabol, but were given a placebo instead. They all showed significant increase in strength while on the placebo. This study points up the necessity of using the double blind research design to eliminate the psychological effect of taking the drug. Another study by Ariel and Saville (3) showed that three subjects on Dianabol had significant faster reflex arc times in the knee jerk reflex than did three control subjects. For four months the subjects were trained for five days a week and performed test trials on the sixth and seventh days. The study period lasted the following eight weeks. During the second, third, and fourth weeks all subjects were given a placebo and told it was Dianabol. At the fifth week a double blind study was begun with three subjects receiving 10 mg of Dianabol and three subjects continuing to receive the placebo. The anabolic steroid had a significant effect upon the reflex components but the authors also stressed the need for further study to elucidate the specific biochemical changes that facilitate this faster motor time. Another study by Ariel (4) investigated the effects of Dianabol upon skeletal muscle contractile force. This study used the identical design of the previous study. The author concluded the steroid fostered a greater contractile force than was possible during the training period and the rate of progress was higher during the anabolic period. None of Ariel's studies made use of protein supplements to the diet.

Detection of Users

An important problem which has contributed to the continued use of anabolic steroids is the sporting world's inability to detect users. A survey by Silvester (32) at the Munich Olympics concluded that 65% of the athletes in the weight events in track and field would be in favor of banning steroids if a reliable, inexpensive method of detection could be found. Gas chromatography can be used to detect steroid metabolites in urine (25) but the cost is about $1000 per test and a series must be run to establish validity. (32) There is hope in this area, however. On October 31, 1973, Dr. Roger Bannister, chairman of the Sports Council, announced in London that a research team headed by Professor Raymond Brooks had developed a test which was extremely accurate and inexpensive. (9) The test involves reacting a specimen of blood or urine with an antibody produced by combining an unspecified steroid with protein. Dr. Bannister hoped the test would be functional enough to permit spot use at the Commonwealth Games in Christchurch, New Zealand, in February, 1974. He stated the test would definitely be ready for the Montreal Olympics.

Ethical Considerations

The primary ethical consideration against steroid (and any other drug) usage is sports is voiced by Prokop (31) as follows:

(continued on p. 190)
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National Athletic Trainers Association NATA
Deca-durabolin in a study using the progressive resistance training on effects of anabolic steroid plus double blind design to determine the experimental group made significant gain in strength and lean body mass. Further, significant gain within both groups in the area of strength for strength, and body composition was weight gain may be mostly fluid lean body mass in sixteen normal, healthy males. Each subject was tested retention and not muscle hypertrophy.

A study by Ward (36) investigated the effects of Stanazolol on the body weight, body composition, and strength of normal young men. Twenty-seven men were assigned to one of four groups: 1) steroid, 2) steroid and a progressive resistance weight training program, 3) placebo, and 4) placebo and a progressive resistance weight training program. Analysis of data indicated the supervised weight training program played no part in influencing recorded anabolic steroid effects. Those on the steroid gained significantly more weight than controls but the lack of significant differences between those on the steroid and the controls in the areas of strength and specific gravity suggested that the weight gain may be mostly fluid retention and not muscle hypertrophy.

A study by Casner and his co-workers (12) studied the effects of Stanazolol on the body weight, body composition, and strength of normal young men. Twenty-seven men were assigned to one of four groups: 1) steroid, 2) steroid and a progressive resistance weight training program, 3) placebo, and 4) placebo and a progressive resistance weight training program. Analysis of data indicated the supervised weight training program played no part in influencing recorded anabolic steroid effects. Those on the steroid gained significantly more weight than controls but the lack of significant differences between those on the steroid and the controls in the areas of strength and specific gravity suggested that the weight gain may be mostly fluid retention and not muscle hypertrophy.

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before the body is actually ready. A permanently enlarged clitoris and a permanently lowered voice are also possible in girls who indiscriminately use steroids for athletic purposes over relatively short periods (less than one year).

To date, no one has found an anabolic steroid which is only anabolic and not some part androgenic. When one is found, then the question of side effects will clear; however, there will always be the ethical consideration of all competitors starting under equal circumstances. After all, sport is the act of two human beings in competition with one another based on their innate skills and not on which one has the best druggist.

11) Bullock, G., White, A.M., and Worthington, J., “The Effects of Cata-
33) U.S. Congress, Senate, Committee on the Judiciary, Proper and Improper Use of Drugs by Athletes, Hearing Before The Subcommittee to Investigate Juvenile Delinquency of the Committee on the Judiciary on S. res. 56 Sec. 12, 93rd congress, 1st Session, June 18 and July 12 and 13, 1973, pp. 93-92, 124:131, 770-843.
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- Also effective as fungicides and deodorants to help eliminate and control offensive odors in lockers, locker rooms, toilets and gyms.

**Cramer-Sol™** disinfectant cleaner is designed specifically for use on hard surfaces in training rooms, locker rooms, showers, whirlpools, washrooms, and other athletic facilities. Regular use of this powerful, new disinfectant cleaner can help control a wide range of disease-causing germs and viruses.

**Matt-Kleen™** disinfectant cleaner offers a new way to easily and quickly sanitize and disinfect wrestling mats, pads, headgear and other contaminated semiporous surfaces. When used as directed, this highly effective disinfectant cleaner can reduce the incidence of virus-related skin diseases that hamper many wrestling teams.

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