



THE **JOURNAL**
of the National Athletic Trainers Association

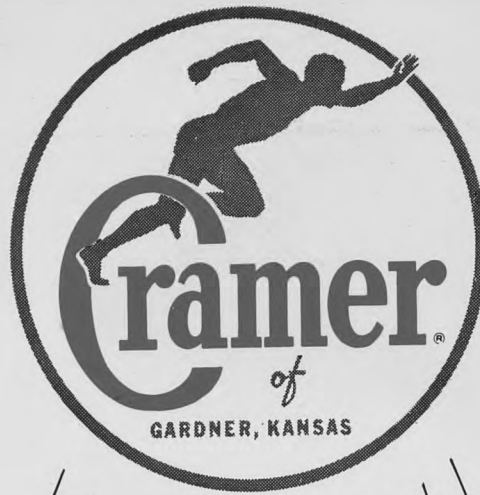
MARCH 1965

Lloyd R. Wilson
1930 South York # 101
Denver 10, Colo.



WHEN EQUIPMENT
FAILS TO PROTECT

—For details, see page 20.



The Essentials for a Well Equipped Training Room



THE JOURNAL

of the *National Athletic Trainers Association*

MARCH 1965

CONTENTS

Mouthguards Protect Head and Neck, Too	3
<i>Summary of the Five-Year Indiana Study</i>	
Blackouts—Some Causes and Cautions	6
<i>Wesley K. Ruff</i>	
Know Your Directors	14

DIRECTORS

District 1—CARL E. NELSON Colby College, Waterville, Maine	District 6—BOBBY GUNN Lamar State College of Technology, Beaumont, Texas
District 2—JOE BLANKOWITSCH Muhlenberg College, Allentown, Pennsylvania	District 7—ART DICKINSON, JR. Arizona State University Tempe
District 3—FRED HOOVER Clemson University Clemson, South Carolina	District 8—MARVIN ROBERSON Foothill College Los Altos, California
District 4—GAYLE ROBINSON Michigan State University East Lansing	District 9—JOE WORDEN Vanderbilt University Nashville, Tennessee
District 5—LLOYD WILLIAMS University of Colorado Boulder	<i>Executive Secretary:</i> WILLIAM E. NEWELL, PURDUE UNIV.

The Journal of the National Athletic Trainers Association is published quarterly at Palo Alto, California. Subscription charge to members: \$1.00 per year.

Editor and Advertising Manager: D. CONRAD JARVIS. Managing Editor: MARVIN ROBERSON.

Application to mail at second class postage is pending at Palo Alto, California.

All communications concerning *The Journal* should be directed to D. Conrad Jarvis, Department of Athletics, Stanford University, Stanford, California 94305.

The NATA *Journal* editors welcome the submission of articles which may be of interest to persons engaged in or concerned with the progress of the athletic training profession. The following suggestions are offered to those submitting articles for consideration:

1. All manuscripts should be typewritten, double-spaced, on ordinary typing paper.

2. When references are made to other published works, include superscript numerals and appropriate footnotes giving author, title of book or article, periodical or volume number, pages, and date of publication.

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

4. It is the understanding of the *Journal* editors that any manuscripts submitted will not have been published previously.

Unused manuscripts will be returned when accompanied by a stamped, self-addressed envelope. Please address contributions to the Editor.

1965 CONVENTION: Chicago, June 13-16. Chairman: Tom Healion, Northwestern U.

EDITORIAL

THE OLD TRAINING FORMULA of tape, a rubdown, and "it doesn't really hurt, you just think it does" died quite a while ago. Competent, dedicated trainers laid it to rest—but even if they hadn't, the people would have. Athletes, parents, and even sports fans have come to appreciate the possibilities of prevention and therapy. Whatever the causes, the nation is far more medically conscious and sophisticated than in yesteryear.

The trainer today is expected to be a professional. He is expected to have appropriate education and a dedicated, serious approach to his job whether he plies his trade with world professional champions or a country high school.

It is the function of the National Athletic Trainers Association to delineate standards for trainers, and to press for their achievement by everyone engaged in the profession. Certain steps are clear. There must be more and better advanced study in sports medicine. Trainers must seek it, colleges and universities must offer it. Every trainer must complete a course in physical therapy certified by medical and educational authorities; by June 1968 every member of the NATA must have such certification.

Above all, the trainer must never stop trying to expand his knowledge. He must read, he must keep in touch with the continuing developments in medicine—remembering that his alliance is with the medical world, not with coaching. Maintaining these high professional standards requires of the trainer a good deal of that which he expects from the athletes he serves: *dedication*.

MOUTHGUARDS PROTECT HEAD AND NECK, TOO

Five-year study by Indiana dentists cooperating with Notre Dame University gives impressive evidence of the value of mouthguards in preventing concussion and neck injuries as well as protecting teeth.

THERE IS LITTLE, if any, disagreement about the value of mouthguards for athletes engaged in contact sports, football in particular. Usually, arguments in favor of the use of the mouthguard center on the reduction of dental injuries. Four Indiana dentists, however, think use of the mouthguard also can reduce significantly the incidence of concussions and neck injuries.

The four dentists are John M. Stenger, D.D.S., Edward A. Lawton, D.D.S., and Jack M. Wright, D.D.S., all of South Bend; and James Ricketts, D.D.S., of Kokomo. Results of their five-year study were first published last year in the *Journal of the American Dental Association*. The four have built a strong case in support of their views, and their findings merit consideration by all trainers.

Their interest began early in the 1958 football season when their attention was drawn to a key Notre Dame player who, apparently as a result of a concussion, was sidelined with a severe loss of equilibrium. The condition had been diagnosed as Ménière's syndrome, and there was considerable doubt that he would ever again play football.

"Examination of the boy's mouth," they reported, "revealed a beautiful dentition. Yet, when the cotton rolls were placed between his posterior teeth and he was instructed to swallow, his face suddenly lit up; he told us that it was the first time in three weeks that his ears had cleared. From this point on it was easy for us. We knew exactly what had to be done.

"An interocclusal acrylic template (posterior occlusal acrylic splint) was made to cover all the mandibular posterior teeth, and a mandibular mouthguard was also constructed. The patient was instructed to wear the template (splint) at all times, changing to the mouthguard only when playing football. In a few days his equilibrium was normal, and in less than two weeks he resumed his starring role on the team. He finished the season with no difficulty.

"The interesting part of this story lies in the fact that the patient had always been prone to concussion. This dated back to his high school days, when he had been selected an All-American high school player. He could not recall playing in a game or scrimmage in which he had not been knocked partly or completely unconscious (concussion, as used in this article, refers to any loss of consciousness experienced by a player during contact, whether a momentary loss of consciousness or an amnesia-like disorder that lingers for hours).

"From the time he started wearing a mouthguard, though, his head remained completely clear at all times. In addition, he observed that when he 'hit really hard' after he started wearing his mouthguard, he did not experience the spine-tingling electric shock from which he had suffered before. He finished the season at Notre Dame, played in the North-South All-Star game in Miami, Florida, and played two years of service football after graduation."



for the professionals
... from the
professionals!



**NOW! A complete line of
athletic pharmaceuticals for coaches and trainers
... made by a company with
over 50 years' experience in the drug field ...
sold by the most familiar name in
the athletic supply business!**

USED BY UNITED STATES OLYMPICS TRAINERS / Tokyo, Japan, 1964



TRU-LAB PRODUCTS
division of Truett Laboratories

13450 HARRY HINES BOULEVARD • DALLAS, TEXAS 75234

represented
nationally by



FREE!



Write direct to TRU-LAB for your complimentary package of
TRU-STIM... the unique saliva stimulant
with an apple-citrus flavor

Their success with this patient led the dentists to a more detailed consideration of oral, head, and neck injuries suffered in contact sports. With the full cooperation of Notre Dame trainer Gene Paszkiet, they used Irish athletes in a long-term investigation which involved assessing the three types of available mouthguards—stock, mouth-formed, and custom-made—to find the most effective type; and then, through practical tests, to determine what effect the mouthguard had in preventing and reducing injuries.

Their findings, in summary:

A mouthguard, to provide sufficient protection and to be "acceptable" to the wearer, must:

Be custom-made to an accurate model of the player's mouth;

Be comfortable so that the player will accept it—the edges must be thin;

Have sufficient retention to keep it from being accidentally dislodged during contact or while calling signals;

Be tough enough to keep the teeth from biting through and durable enough to last two seasons;

Be thermally resistant to enable sterilization by boiling or autoclaving and, also, be compatible with the mouth tissues at body temperatures;

Be chemically odorless and tasteless; and

Receive approval by the Food and Drug Administration of all components, individually and in combination.

After a series of disappointing experiments with different models, the dentists in spring 1963 hit upon a custom-made modified vinyl elastomer guard which proved extremely successful. Tests during the spring football drills led to equipping the entire Notre Dame team with these mouthguards for the 1963 season. Results were dramatic:

There were only four minor dental injuries; in all cases, the players were not wearing the mouthguards.

Out of 10 concussions suffered, nine were to players not wearing the mouthguard at the time of injury. (The one player so injured while wearing his mouthguard was decidedly concussion-prone; during the previous year he suffered "numerous" concussions, each requiring several days of rest; the concussion received while wearing the mouthguard lasted only 20 to 30 seconds, and he engaged in contact work the next day.)

There was an unexpected reduction in the num-

ber of neck injuries. During the 1962 season, the doctors report, "six or seven players had chronic neck problems, and four of them wore cervical collars," but "not a single Notre Dame player who faithfully wore his mouthguard during the 1963 season found it necessary to wear a cervical collar." The need for cervical traction, routine therapy for these injuries, was almost eliminated.

In conclusion, the dentists report that by altering structures "the custom-fitted mouthguard provides protection and relief for patients with head and neck injuries from playing football. In four patients, roentgenograms were taken and tracings made which illustrate the improvement seen when a custom-fitted mouthguard is used as therapy with an interocclusal acrylic template.

"It is dentistry's responsibility to participate in the development of the best mouthguard possible. Achieving this goal will involve, among other things, consideration of all the traumatic forces which can be transmitted through the teeth or through the condyle. Achieving this goal will mean, for those engaged in active contact sports, protection of both the teeth and the head and neck structure in which the teeth are housed."

* * *

The detailed report from which this article was prepared, complete with roentgenograms and tracings of four case studies, appeared in the September 1964 issue of the *Journal of the American Dental Association* (volume 69, pages 273-81; copyright by the American Dental Association; reprinted by permission). Reprints are available from the ADA, 222 East Superior St., Chicago, Illinois, 60611.

Loafer's Heart, Not the Athlete's, Is "Abnormal"

The notion that the athlete's heart is abnormally and unhealthfully enlarged has long been exposed as a myth. To the contrary, the heart of the trainer athlete should be considered normal and its counterpart, the loafer's heart, abnormal. This is the substance of a statement by the American Medical Association Committee on the Medi-

(Continued on page 18)

BLACKOUTS—SOME CAUSES AND CAUTIONS

Weightlifters and underwater swimmers are common victims. There are warning signals, but for the swimmer they may come too late.

By WESLEY K. RUFF

*Department of Athletics and Physical
Education, Stanford University*

IN WEIGHT LIFTING and swimming special circumstances frequently produce loss of consciousness. This blackout phenomenon—apparently not often explained—is not often understood. Many coaches and trainers have seen it demonstrated, however, when a lifter, while doing a very slow press or coming out of a full squat clean too slowly, blacks out and completely collapses. Among teen-agers not so long ago it was a popular stunt to have someone take three deep breaths, hold the third, then have someone else squeeze them tightly around the chest. If the “victim” held his breath for 10 seconds or so he usually blacked out for a few seconds. The question now is, what happens under these circumstances?

When the glottis is closed to hold the breath, the thoracic (chest) cavity becomes an airtight compartment. When a weight is lifted and held or the chest is squeezed, this increases the pressure within the cavity. The pressure of blood returning to the heart is not very significant, so it does not require much weight to increase the pressure in the chest cavity to the point where it exceeds the pressure of the venous blood returning to the heart. The heart then receives very little, if any, blood to pump. Even though the heart keeps on beating, its output is grossly reduced and systolic blood pressure drops. The resulting reduction in

the blood supply is felt quickly by the brain, and a blackout results. After blackout, the glottis is relaxed, normal thoracic pressure is restored, and blood flows normally again.

While this condition does not appear harmful to normally healthy persons, it does pose concern for those with arterial deterioration of any kind. When normal thoracic pressure is returned in the chest cavity after a prolonged (10 to 20 seconds) increase in pressure, the venous blood rushes into the heart at a rate far above normal. As a result, the heart is slightly stretched and, because it is stretched, beats harder (stretch reflex), thus forcing an unusual volume of blood through the pulmonary artery at an unusually high velocity. For this reason, untrained older persons and those with cardiovascular problems should avoid holding the breath while exerting against weights or while engaging in isometric exercises. Usually these people are under a physician's care and already are well aware that they should avoid any heavy exertion.

As to prevention, there is little to suggest to the determined lifter. Perhaps the only worthwhile suggestion would be to keep the weight moving, since stalls are the problem. In addition, there is a warning sign that can be kept in mind. Just before blackout, the visual field begins to close, giving the feeling of being in a tunnel with a light at the far end. At the onset of tunnel vision, the lifter should put the weight down and release the breath to avoid a total blackout.

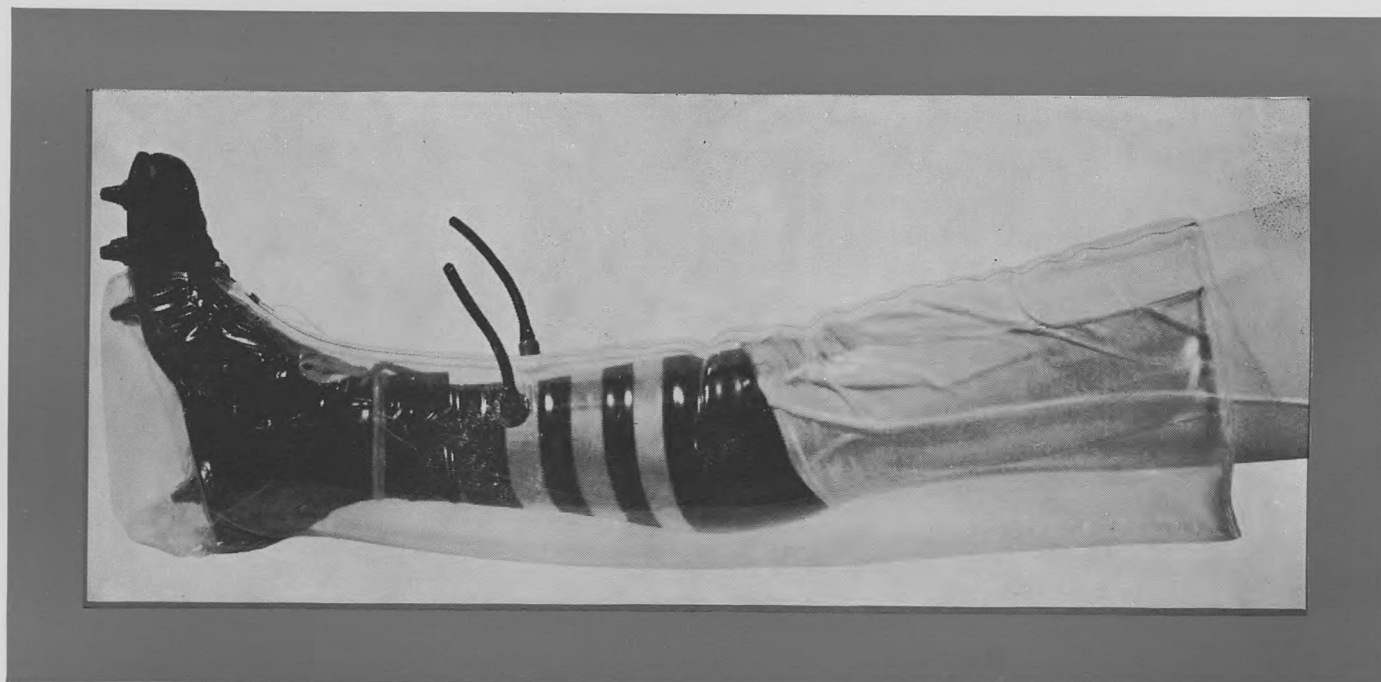
Swimmers who swim under water for excessive

NEW...

IMMOBILIZATION OF FRACTURES— ON THE SPOT

READISPLINT™

air-pressure bandage-splint



Just wrap this double-walled vinyl plastic sheet around the injured limb, zip it closed, and inflate by mouth like a balloon. Quickly and simply, READISPLINT provides effective immobilization with even and controllable pressure. READISPLINT will enable your patient to be transported in comfort...and his injury x-rayed before the splint is removed. READISPLINT is available in six models for use in hand, arm, leg, or foot injuries, and in a special full-leg, open-toe model for ski or football injuries. Let the Parke-Davis representative demonstrate the practicality of READISPLINT.

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit, Michigan 48232

59164



INSTANT COLD PACK

*Use anytime—anywhere
with just a flick of the wrist*

• Snaps open • Cold in seconds • No inner bag to break

MediCold, by Premier, is perfect cold therapy for sprains, bruises, contusions, dislocations, muscle strains, nose bleed and a host of other athletic injuries, and heat or sun stroke problems.

Every athletic department needs an emergency supply of MediCold on hand. MediCold is in a vinyl bag that pops open for instant use. It is guaranteed not to leak in use or in storage. Every pack is always useable.

MediCold conforms to body curves being treated and is complete with a tie string to hold the compress in position. No mess, no bother, simple to use.

*Ask your sporting goods dealer about
MediCold or write direct to:*



premier PREMIER PRODUCTS
PRODUCTS, RIVER VALE, NEW JERSEY

PATENT # 2601868

distances are known to suffer blackouts. Such blackouts are possible any time, but most often occur after the swimmer has hyperventilated prior to diving beneath the surface. Hyperventilation increases the oxygen in the blood insignificantly, but it significantly decreases the carbon dioxide carried by the blood. Breathing rates and sensitivity to the need for breathing are regulated largely by the amount of carbon dioxide in the blood. Normally, when the breath is held the carbon dioxide content builds up as the oxygen diminishes, and the body virtually screams for air. But under hyperventilated circumstances the carbon dioxide apparently does not build up as fast as the oxygen is utilized. As a result the mechanisms which normally send distress signals fail to operate in time. The blackout, therefore, comes on without the usual conscious distress for air. As in weight lifting, the swimmer will experience tunnel vision just as the blackout begins

to occur, but if he is sufficiently deep he may be unable to surface in time to save himself.

All swimmers should be made well aware of hyperventilation and its effects, because this culprit thwarts the body's normal built-in warning signals. Prevention is best accomplished, however, simply by avoiding excessive underwater swimming.

* * *

Many studies have been undertaken about the problems of blackouts while swimming. Particularly applicable is "Causes of Loss of Consciousness During Underwater Swimming" by Albert B. Craig, Jr., in the July 1961 issue of *Journal of Applied Physiology* (volume 16, page 583). The role of CO₂ in breathing is described in "Regulation of Respiration" by H. E. Hoff and C. G. Breckenridge in *Textbook of Physiology*, edited by John F. Fulton (W. B. Saunders & Co., Philadelphia, 1955, pages 867-86).



DR. WESLEY K. RUFF is associate professor of physical education and education, and coordinator of the physical education program at Stanford University. He is an Oklahoman by birth, but grew up in Phoenix, Arizona. He graduated from the University of Arizona, spent five years with the Army Air Force physical training program, taught and coached at Brooklyn College while earning master of arts and doctor of education degrees at Columbia, then returned to Arizona in

1951 to head the University's Health Education Department in addition to teaching and coaching duties. Dr. Ruff has been at Stanford since 1955, except for one year in Thailand as a Fulbright Lecturer at Chulalongkorn University, Bangkok. In addition to his administrative duties he teaches in the professional physical education program and is currently developing a Human Performance Research Lab.

New "Tips on Training" Issued by AMA Committee

Tips on Athletic Training VI, published by the American Medical Association as the latest in their series of informative pamphlets for trainers, deals with quackery in sports, conditioning and contact sports, protective equipment, ankle wraps, healing of sports injuries, blisters, the vaulting pole, and conditioning after release from rigorous training schedules. The comments are offered by the National Federation of State High School Athletic Associations and the Committee on the Medical Aspects of Sports of the AMA.

The section on quackery discusses the importance of relying on physicians for medical diag-

nosis and prescription, and of avoiding nonscientific or pseudoscientific "gimmicks."

Conditioning should be continuous, the pamphlet points out. It gives a brief comparison chart on isotonic and isometric exercises.

Two points of caution are offered under "protective equipment." Inferior equipment gives the wearer a false sense of security and puts him in jeopardy of serious injury, and coaching that utilizes protective equipment as a weapon is indefensible.

Ankle wraps are suggested for all players
(Continued on page 18)



There are only two ways to get overnight heat therapy

But only penetrating Bike Thermo Pack Analgesic delivers 12 hours of therapeutic heat in action! Methyl nicotinate, the heating and healing ingredient in Thermo Pack, is exclusive with Bike. Two applications daily maintain healing, soothing heat round the clock. Delivering twice the

heat in half the time of short-lived analgesics, Bike permits the continuous maintenance of the healing process . . . gets players back into action faster . . . even works while they sleep. Perfected in the Bike Research laboratories, and proven best by three years of actual use on the field, Thermo Pack is

Made available by
AMA to NATA

Remove & display in
Training Quarters

injury occurred.

ACT, but move the athlete *only* after serious injury is ruled out.

BONES AND JOINTS

fracture Never move athlete if fracture of back, neck, or skull is suspected. If athlete *can* be moved, carefully splint any possible fracture. Obtain medical care at once.

dislocation Support joint. Apply ice bag or cold cloths to reduce swelling, and refer to physician at once.

bone bruise Apply ice bag or cold cloths and protect from further injury. If severe, refer to physician.

broken nose Apply cold cloths and refer to physician.

HEAT ILLNESSES

heat stroke Collapse—with dry warm skin—indicates sweating mechanism failure and rising body temperature.

THIS IS AN EMERGENCY; DELAY COULD BE FATAL. Immediately cool athlete by the most expedient means (immersion in cool water is best method). Obtain medical care at once.

heat exhaustion Weakness—with profuse sweating—indicates state of shock due to depletion of salt and water. Place in shade with head level or lower than body. Give sips of dilute salt water. Obtain medical care at once.

sunburn If severe, apply sterile gauze dressing and refer to physician.

heavy bleeding Apply sterile pressure bandage using hand pressure if necessary. Refer to physician at once.

cut and abrasion Hold briefly under cold water. Then cleanse with mild soap and water. Apply sterile pad firmly until bleeding stops, then protect with more loosely applied sterile bandage. If extensive, refer to physician.

puncture wound Handle same as cuts; refer to physician.

nosebleed Keep athlete sitting or standing; cover nose with cold cloths. If bleeding is heavy, pinch nose and place *small* cotton pack in nostrils. If bleeding continues, refer to physician.

OTHER CONCERNS

blisters Keep clean with mild soap and water and protect from aggravation. If already broken, trim ragged edges with sterilized equipment. If extensive or infected, refer to physician.

foreign body in eye Do not rub. Gently touch particle with point of clean, moist cloth and wash with cold water. If unsuccessful or if pain persists, refer to physician.

lime burns Wash thoroughly with water. Apply sterile gauze dressing and refer to physician.

EMERGENCY PHONE NUMBERS

Physician	Phone:
Physician	Phone:
Hospital	Ambulance
Police	Fire
	Other

The American Medical Association designed this symbol to be a universal sign indicating the presence of information important to the life and health of the wearer. The first aider should know when people have special health problems.



Prepared by the AMA Committee on the Medical Aspects of Sports in cooperation with the National Athletic Trainers Association and the National Federation of State High School Athletic Associations.



first aid chart for athletic injuries

FIRST AID, the immediate and temporary care offered to the stricken athlete until the services of a physician can be obtained, minimizes the aggravation of injury and enhances the earliest possible return of the athlete to peak performance. To this end, it is strongly recommended that:

ALL ATHLETIC PROGRAMS include prearranged procedures for obtaining emergency first aid, transportation, and medical care.

ALL COACHES AND TRAINERS be competent in first aid techniques and procedures.

ALL ATHLETES be properly immunized as medically recommended, especially against tetanus and polio.

Committee on the
Medical Aspects of Sports
AMERICAN MEDICAL ASSOCIATION

**to protect the athlete at time of injury,
FOLLOW THESE FIRST STEPS FOR FIRST AID**

STOP play immediately at first indication of possible injury or illness.

LOOK for obvious deformity or other deviation from the athlete's normal structure or motion.

LISTEN to the athlete's description of his complaint and how the injury occurred.

IMPACT BLOWS

head If any period of dizziness, headache, incoordination or unconsciousness occurs, disallow any further activity and obtain medical care at once. Keep athlete lying down; if unconscious, give nothing by mouth.

teeth Save teeth, if completely removed from socket. If loosened, do not disturb; cover with sterile gauze and refer to dentist at once.

solar plexus Rest athlete on back and moisten face with cool water. Loosen clothing around waist and chest. Do nothing else except obtain medical care if needed.

testicular Rest athlete on back and apply ice bag or cold cloths. Obtain medical care if pain persists.

eye If vision is impaired, refer to physician at once. With soft tissue injury, apply ice bag or cold cloths to reduce swelling.

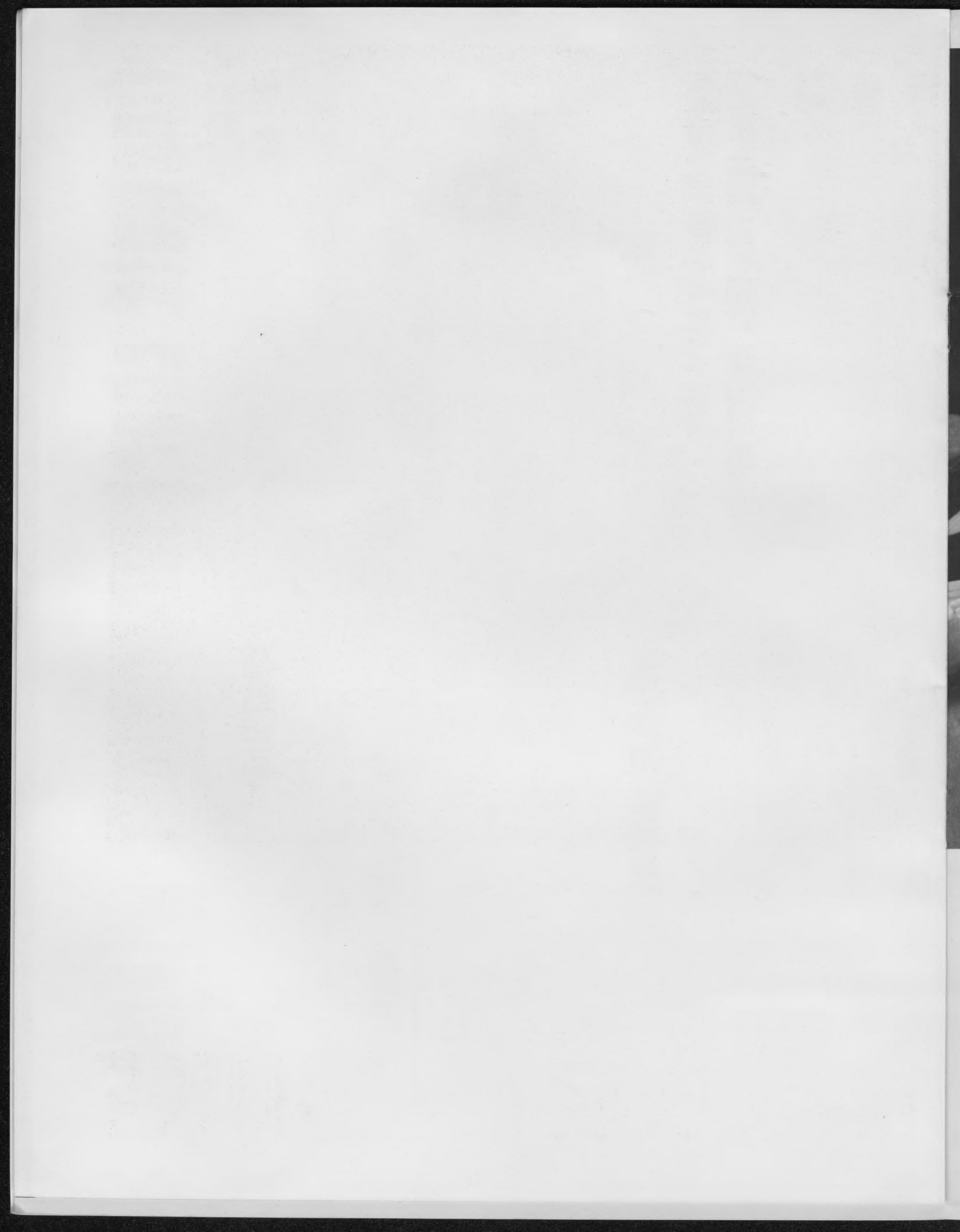
MUSCLES AND LIGAMENTS

bruise Apply ice bag or cold cloths and rest injured muscle. Protect from further aggravation. If severe, refer to physician.

cramp Have opposite muscles contracted forcefully, using firm hand pressure on cramped muscle. If during hot day, give sips of dilute salt water. If recurring, refer to physician.

strain and sprain Elevate injured part and apply ice bag or cold cloths. Apply pressure bandage to reduce swelling. Avoid weight bearing and obtain medical care.

OPEN WOUNDS





surprisingly economical. The exclusive screw top two-pound can costs 6% less than two one-pound containers of other brands. Also ask your dealer about Bike Anti-Fungal Spray, Foam Liniment, Foot and Body Powder and Formula 87 Skin Toughener. Sold only by Sporting Goods dealers.

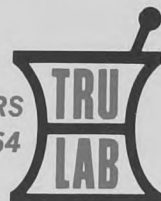
BIKE®



ATHLETIC PHARMACEUTICALS

for the
professionals...
from the
professionals

USED BY UNITED STATES OLYMPICS TRAINERS
Tokyo, Japan, 1964



GUARANTEE: All TRU-LAB products are guaranteed to meet or exceed the standards set by the United States Food and Drug Administration and other Government agencies.

Prices subject to change without notice.

PRODUCT	USE	PACKAGE	COST
APC	ASPIRIN PLUS Acetophenetidin and Caffeine. Take as you would aspirin to relieve mild injury pains, pains of neuralgia, simple headaches due to tension and common colds.	Tablets: bottle, 100	.40
BACTISEP	Germicidal disinfectant with antibacterial, antifungal and antiseptic advantages. Helps prevent skin infections, disinfects equipment and refreshes whirlpool baths.	Liquid: pint (plastic)	.70
BANDAIR	Medicated spray bandage. Provides flexible plastic protection over cuts, wounds and abrasions. Allows air to reach affected area. Ideal for hard-to-bandage areas.	Aerosol: 6 oz.	1.25
BUG BOOM	Insect repellent to repel mosquitoes, chiggers, ticks, flies and gnats. Contains Toluamide.	Aerosol: 6 oz.	1.25
CALAMINE LOTION with Phenol	Lotion for quick, soothing relief of heat rash, sunburn, hives, poison ivy, poison oak, bites of mosquito, chigger and other non-poisonous insects. Does not stain clothing.	Liquid: 4 oz. bottle	.50
CHEW-C	Contains a saturation dose of 250 mg. Vitamin C (Ascorbic Acid) in each delicious-tasting, orange-flavored chewable tablet.	Tablets: bottle, 100	1.95
C-SALT	200 mg. Vitamin C and 5 gr. Salt in each tablet. Non-nauseating due to its enteric coating, which allows tablet to dissolve in lower intestinal tract instead of in the stomach.	Tablets: bottle, 1000	7.50
DERMA-LUBE	A NO-HEAT skin lubricant to help prevent blisters, callouses and skin irritations caused by shoes and equipment rubbing against the skin. Its perspiration-resistant quality prolongs its effectiveness.	Aerosol: 6 oz. Ointment: 4 oz. (plastic) Ointment: 1 lb. (plastic)	1.25 .80 1.85
F-A-D	Shoe, helmet and pad spray containing Hexachlorophene. Works as a fungistat, antiseptic and deodorant to help keep equipment free of moldy odor and help prevent infections and irritations caused by fungus and bacteria-laden equipment.	Aerosol: 6 oz. Aerosol: 20 oz.	1.25 2.50
FORTIFY	A High Potency Multi-Vitamin and Mineral formula with Iron and Bioflavonoids. Does not have the ordinary vitamin taste or smell.	Tablets: bottle, 100	2.95
FRESH'N	Air Freshener and Deodorizer which actually KILLS all unpleasant locker room and gymnasium odors. Leaves "NO PERFUME HANGOVER".	Aerosol: 8 oz. Aerosol: 20 oz.	1.25 2.25
GLIDE	A NO-HEAT Lanolin lotion with IMPROVED SLIP for "rub downs" and general massages. Helps prevent dry skin.	Lotion: pint (plastic)	1.25

PRODUCT	USE	PACKAGE	COST
ICEBERG	A quick freeze local anesthetic for the skin to temporarily relieve pain and swelling of sprains, contusions, hemorrhages and muscular strain.	Aerosol: 6 oz. Aerosol: 20 oz.	.95 2.25
MERTHIOLATE	FIRST AID SPRAY for cuts and abrasions. Acts as antiseptic and germicide.	Aerosol: 4 oz.	2.50
MISTI-CON	Medicated room spray which acts as an instant decongestant vaporizer. For fast relief from colds and hay fever congestion. Greaseless, stainless, non-toxic and non-flammable.	Aerosol: 8 oz.	1.50
NECTA	A delicious tasting HONEY BASE Cough Syrup which works as an anti-histamine, cough suppressant, decongestant and expectorant.	Liquid: 4 oz. bottle	1.50
NEO-DERM	A NO-HEAT medicated creamy massage lotion with Hexachlorophene to help prevent chapping, dry skin and to sooth skin irritations. IDEAL AS AN ULTRASONIC LUBRICANT.	Lotion: pint (plastic)	.95
ORA-HEX	Citrus-mint-flavored mouthpiece cleaner and mouth freshener. Contains Hexachlorophene.	Aerosol: 6 oz. Aerosol: 20 oz.	1.25 2.50
POW	A UNIQUE FINELY TEXTURED powder with a pleasant fragrance. Helps prevent blisters because of its silky adherence to the skin. For athlete's foot and fungus infections of the groin. Fungicidal, antiseptic and deodorant.	Aerosol: 6 oz. Aerosol: 20 oz.	1.25 2.50
RELEASE	Quick-acting tape remover containing no harsh solvents. Actually soothes and lubricates the skin.	Aerosol: 6 oz. Aerosol: 20 oz.	.95 2.25
STIK	CLEAR, NON-STAINING quick-drying, antibacterial tape adherent with Hexachlorophene.	Aerosol: 6 oz. Aerosol: 20 oz.	.95 2.25
THERMO-FLEX	A NON-RUNNY oily base liniment with an excellent "slip" for HEAT massage. Lubricates, stimulates and penetrates to relieve tight and tired muscles, pulled ligaments, minor aches and bruises. In two forms: AEROSOL for travel; GEL, which liquefies immediately upon contact with the skin.	Aerosol: 6 oz. Aerosol: 20 oz. Gel: pint (plastic)	1.25 2.50 2.00
TRACK	A NON-STAINING, NON-IRRITATING fungicidal-antiseptic SPRAY for athlete's foot and fungus infections of the groin. Contains no alcohol.	Aerosol: 6 oz. Aerosol: 20 oz.	1.25 2.50
TRI-GRIP	Non-sticky hand drier for athletes. Keeps hands and fingers dry for hours with a rosin-type grip.	Aerosol: 6 oz. Liquid: 60cc (plastic squeeze)	1.50 .95
TRU-BALM	A water washable, non-irritating analgesic HEAT BALM to relieve minor aches and muscle soreness where massage is not indicated. For Heat Pack.	Ointment: 4 oz. (plastic) Ointment: 1 lb. (plastic) Ointment: 5 lb.	.95 2.95 13.25
TRU-CLEAN	Skin cleanser which will not dry or chap skin. Easily and quickly removes grease, benzoin, tar, paint and tape residue. Leave no harsh solvent effect.	Aerosol: 6 oz. Aerosol: 20 oz.	1.50 3.25
TRU-STIM	Citrus-flavored saliva stimulant for "Cottonmouth". One quick spray relieves dryness, refreshes mouth and reduces excessive desire for liquids. Also lubricates protective mouth piece.	Aerosol: 6 oz. Liquid: 60cc (plastic squeeze)	1.50 .95
TUF'N	Non-Sticky skin toughener and athlete's foot preventive. Helps prevent blisters, cuts friction and protects taped skin. DOES NOT STAIN SKIN. Contains Hexachlorophene.	Aerosol: 6 oz. Aerosol: 20 oz.	1.25 2.50
ULTRAMINE	An effective daytime cold and allergy tablet in handy "cello-pak". For relief of discomforts due to colds, hay fever and sinus congestion. Contains Chlorpheniramine Maleate, a powerful antihistamine; Salicylamide and Acetophenetidin to reduce pain and fever; Atropine Sulfate to help relax the bronchial muscles and dry up bronchial secretions; Vitamin C and Hesperidin Complex to fight colds; and Caffeine to increase circulation, offset some symptoms of drowsiness.	Tablets: box, 96	1.75

prices effective January 1, 1965

TRU-LAB PRODUCTS
division of Truett Laboratories



13450 Harry Hines Blvd. • P.O. Box 14483 • Dallas, Texas 75234

Know Your Directors



CARL E. NELSON—District 1

Colby College, Waterville, Maine

Before moving to Colby College in 1959, Carl Nelson had spent most of his life in and around Boston. He's a 34-year-old native of Waltham, Massachusetts, who grew up in Newton and earned his Bachelor of Science degree at Boston University. Sandwiched in between were a stint as assistant trainer at Massachusetts Institute of Technology and two years with the U.S. Navy aboard the submarine U.S.S. Ray.

He was also an assistant trainer at Boston U before being appointed physical therapist and trainer at Colby. He is a registered physical therapist with the American Physical Therapy Association. In addition to his duties with Colby, Carl is director of the Pine Tree Camp for Crippled Children in Rome, Maine.

Mrs. Nelson is the former Jean Dyer. The Nelsons have three sons, Douglas, Jeffrey, and Jonathan.



JOE BLANKOWITSCH—District 2

Muhlenberg College, Allentown, Pennsylvania

During his high school days in Allentown, Pennsylvania, Joe Blankowitsch earned four varsity letters in basketball and baseball, but he had to pass up a partial scholarship at Temple University in 1929 in order to help support the family. Then the depression arrived, and it was quite a while before Joe got back into athletics. In 1945 he left Bethlehem Steel Company to join Allentown High School as assistant trainer. A year later he was named trainer and equipment manager. In 1959 he moved to Muhlenberg College as head trainer to succeed the late William "Scotty" Renwick.

Thus, Joe has about 20 years of training experience. He has been a member of the NATA since 1952, and has attended eight clinics ranging all the way from the Midwest to Florida to California. In addition to his duties as Director for District 2, he has been NATA registration chairman for nine years and also serves in that capacity for the Eastern Athletic Trainers Association. In 1947 Joe married Helen Olsovsky of Allentown, and their daughter, Patricia, is now a senior at Allentown High.



FRED W. HOOVER—District 3

Clemson University, Clemson, South Carolina

When Fred Hoover received his B.S. degree in physical education at Florida State University, Tallahassee, in 1953 he interrupted his training career for three years to serve with the U.S. Air Force (he's now a captain in the Air Force Reserve). He had served two years as trainer before graduating, and put in another two at Florida State after his service before moving north to Clemson in July 1959.

Fred has been quite active as a member of the NATA, having lectured at several football clinics, including the Coach of the Year clinic in Atlanta last year. He is chairman of the NATA Board of Directors. He was also the trainer for the U.S. team in the Pan American Games in São Paulo, Brazil, in 1963.

Fred was born in Jacksonville in 1930 and attended Andrew Jackson High there. At Florida State he was a member of Sigma Chi fraternity. He and Mrs. Hoover, the former Elva Cook of Mt. Vernon, Illinois, have a daughter, Catherine Ann, 6, and a son, Bryan, 4.

Know Your Directors



GAYLE B. ROBINSON—District 4

Michigan State University, East Lansing

Gayle Robinson was a track star at Michigan State in the late 1930's, and is still co-holder of the Spartan varsity indoor record for the 70-yard low hurdles. After his graduation in 1940 he coached for two years at Ravenna, and then returned to his home town of Muskegon as coach and athletic director at Angell Junior High.

In 1943 he coached the Muskegon High team to a 7-1 season and the league championship, then moved to St. Mary's High as football and basketball coach for two years. In 1946 he returned to Michigan State as an instructor and assistant trainer. In 1959 he was named head trainer.

"Robbie" and his wife, the former Evelyn Sietsema, have three children, all attending Michigan State: Robert, 23; Dan, 21; and Jean Marie, 18. In his leisure time Robbie enjoys woodworking and swimming, and for the last 12 years he also has been engaged in YMCA camp work.



LLOYD WILLIAMS—District 5

University of Colorado, Boulder

Lloyd Williams is in his fifth year as head trainer at the University of Colorado, the school from which he received his B.S. degree in physical education and later his certificate in physical therapy. He worked as a student assistant trainer before his graduation, and was a member of the track team as well as manager for both football and basketball.

His first assignment after completing college was a one-year tour as assistant trainer at the Air Force Academy in Colorado Springs. He moved from there back to Colorado as head trainer.

Lloyd's experience includes work with various special teams competing in national AAU track and basketball championships and with the Olympic basketball trials, and he was one of the two trainers for the Winter Olympics at Innsbruck, Austria, last year.

Mrs. Williams, the former Patricia Page, and Lloyd have a daughter, Lisa, 7, and a son, Terry, 5.



ROBERT H. GUNN—District 6

Lamar State College of Technology, Beaumont, Texas

Bobby Gunn gained a lot of experience working with Eddie Wojecki at Rice Institute before his graduation in 1951. He spent the next six years as trainer for the Brazosport School District in Freeport, Texas, and then served in the same capacity with the Baytown School District for three years. After a two-year "vacation" in the life insurance business he came back to training as head trainer at Lamar Tech in 1962.

He was secretary-treasurer of the Southwest Athletic Trainers Association 1955-56, president 1956-58, and has been a member of the NATA Professional Advancement Committee since 1956 and of the Membership Committee since 1963. He was elected to the board of directors last year. He is a certified corrective therapist.

Twice Bobby has gone out of the country as trainer with U.S. teams—to the Pan American Games in 1959 and to Mexico City with our soccer team for the Olympic elimination games last year.

Know Your Directors



ART DICKINSON, JR.—District 7

Arizona State University, Tempe

Coupled with Art Dickinson's extensive experience as a trainer is an impressive educational background—B.A., State College of Iowa; M.S., Indiana University; and Ph.D., State University of Iowa. His first job as head trainer was at Wabash College, in Crawfordsville, Indiana, 1951–52. He moved to his present position at Arizona State in 1952. In addition to his duties as trainer he holds the rank of associate professor in men's physical education.

Art has been quite active in national affairs, also. He has been director of District 7 of the NATA since 1962, and prior to that was editor of the *NATA Journal* from 1956 to 1960. For 1962–63 he was chairman of the Section on Athletic Training of the American Association of Health, Physical Education, and Recreation, and in 1963 he was named a Trustee of the Bike Training Room Foundation.



MARVIN ROBERSON—District 8

Foothill College, Los Altos, California

Marv Roberson got started in training as a student assistant to Rod Kimball at Brigham Young University, Provo, Utah, from which he graduated in 1957. He was also quite active in athletics, playing frosh football and then earning three varsity letters in track. He put the shot well over the 50-foot mark, and was captain of the BYU team that toured Europe in 1956. In high school in Oklahoma he had been state champion shot-putter as a senior.

After graduation from BYU, Marv completed the physical therapy course at Stanford University on a scholarship from The National Foundation, then joined Connie Jarvis in the fall of 1958 as assistant Stanford trainer. Four years later he was named head trainer at Foothill College.

In addition to being District 8 Director, Marv is managing editor of *The Journal*. He was program chairman for the 1964 national convention in Palo Alto. Mrs. Roberson is the former Doris Jean Belbutowski, and there are two little Robersons, Echo, 5, and Dina, 3. Marv's hobby? "Training."

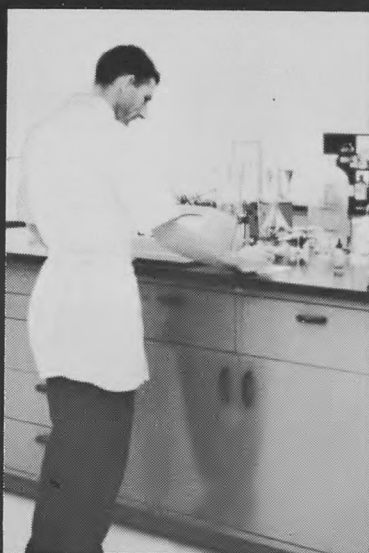


JOE L. WORDEN—District 9

Vanderbilt University, Nashville, Tennessee

At Vanderbilt they characterize Joe Worden as "that rarity, a soft-spoken Texan," and they have a high regard for his ability as a trainer. Joe got started under Frank Medina at the University of Texas, from which he earned the master's degree in 1949. He had played tackle in high school in Greenville, Texas, before entering the University. War duty with the Marines, including action in the Marshall Islands and on Guam, interrupted his education, not to mention his football.

Joe is 44, a native of Greenville, and married to the former Florine Krueger of Smithville. They have two sons, Richard, 18, and Billy, 6.



Researched and manufactured under one roof, TRU-LAB products benefit from management's rigid control of uniform quality, exacting standards of production, packaging and strict demand for constant efficiency. Pharmaceutically correct, especially formulated for your particular needs, these athletic pharmaceuticals truly represent our marketing purpose: from the professionals (TRU-LABS) to the professionals (coaches and trainers).

Used by United States Olympics Trainers / Tokyo, Japan, 1964

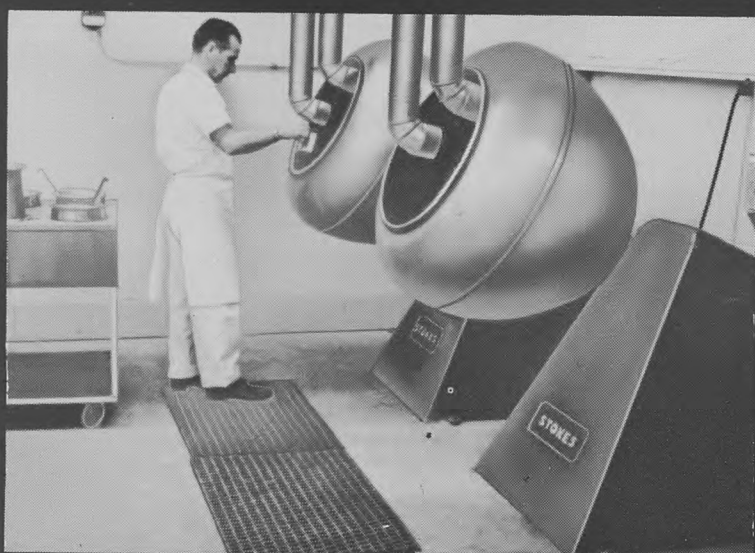
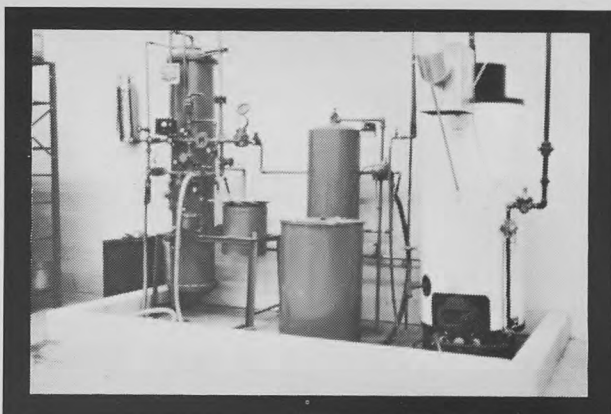
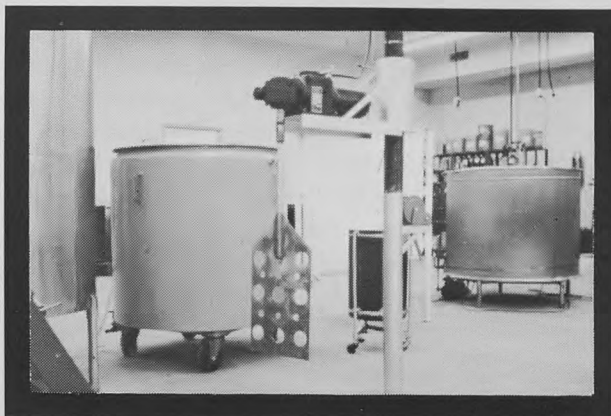


TRU-LAB PRODUCTS

division of Truett Laboratories

13450 Harry Hines Blvd. • P. O. Box 14483 • Dallas, Texas 75234

Represented nationally by Ivory System, Inc.



Loafer's Heart

(Continued from page 5)

cal Aspects of Sports released by the Chicago Heart Association.

The normal function of the heart is to propel blood to the body tissues as required. The athlete's heart, progressively trained for higher requirements as he extends himself beneficially beyond the early stages of fatigue, works far more efficiently at rest and far more capably during exercise. Gradually the heart pumps a greater output of blood per minute with fewer beats. It relaxes longer and more completely between beats, and its strengthened musculature empties the filled chambers more effectively. This higher capacity is reflected in the most fundamental element in all sports—the ability to endure.

As the body's prime endurance muscle, the heart enlarges only moderately if at all. There is no evidence to show that exercise has ever damaged a healthy heart in a properly conditioned athlete. Hearts are weakened by disease or congenital defects, not by participation in sports; however, since considerable stress is necessary to "train" a heart and keep it trained, this same stress can be detrimental or debilitating if disease or defect is present.

Thus, medical evaluation should precede a rigorous program for the athlete of any age. And trainers should be sensitive to symptoms that indicate the need for medical reevaluation: shortness of breath, pounding heart, extreme weakness or shakiness that lasts more than ten minutes after exercise, broken or unusually restless sleep following strenuous exercise, or definite sense of fatigue that holds over through the next day. These symptoms may suggest the athlete's lack of attention to other training requirements such as proper rest and nutrition, but they may also be the clue to a previously undetected heart problem.

It is also important to heed the persistent plea for medical clearance before return to activity after an illness. Some systemic infections have a transient effect on the heart of even an athlete, and heavy exertion during this temporarily weakened state may be disastrous.

Not many athletes achieve the heart capacity of a four-minute miler, and it is equally unrealistic to expect the "loafer" to develop the heart capacity of the average athlete. Yet it is realistic to expect improvement of the loafer's heart capacity through proper exercise within his physical or social limitations. Development of heart capacity through athletics or formalized endurance-type exercises can be good insurance for the American whose life is relatively sedentary.

New "Tips on Training"

(Continued from page 9)

(notably football and basketball), not just those with a history of ankle injuries. The nonelastic 2½–3-inch bandage is recommended; "it is not felt that the more expensive practice of routine adhesive wrapping has any additional value."

Among six physiological principles listed under "healing of sports injuries" is the statement that there is no drug stimulus to wound healing. Drugs can only facilitate the normal healing process. The necessity for protection from reinjury long after an athlete has recovered is also stressed.

While the section on blisters gives rather definitive information on the treatment of blisters,

it emphasizes prevention through such conventional practices as proper shoe fitting and breaking-in, a light pair of socks under sweat socks, and care in wrapping.

In urging tender, loving care of fiber glass vaulting poles, the pamphlet particularly warns against the use of a pole rated for a lighter athlete. Manufacturers warn that breakage is apt to occur if poles are overloaded by as little as five pounds. "Most of today's 16-foot vaulters use a pole specified for a vaulter weighing five pounds more than the competitor," the pamphlet says.

Finally, in pointing up the wisdom of conditioning as a way of life, the pamphlet calls upon coaches to be concerned with the carry-over into later life of the values of training as well as their immediate purpose during competition.



KEEP YOUR TEAM AHEAD

with

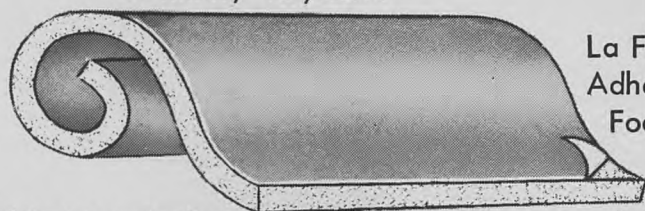
E-Z Walk's Complete Line of

FOOT REMEDIES

for the

ATHLETE

More and more coaches and trainers are depending on the E-Z Walk line of Foot Reliefs for their athletes. Wherever footwork counts---you can count on E-Z Walk---Specialists in Foot Savers for nearly 40 years.

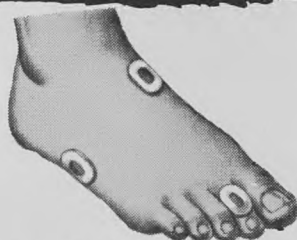


La Fome
Adhesive
Foam



.Foam Rubber
.Chlorophyl
.Sponge
.Cork
.Leather Gummed
."Treated"

E-Z Walk
Insoles
cushion
a players
steps---
retards
fatigue!
outfit your
whole team
for more speed,
better training!



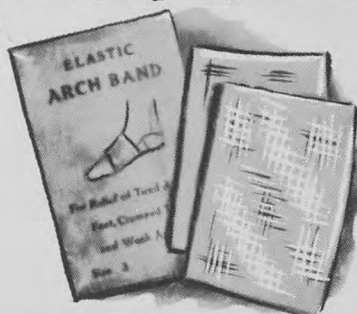
Propody Pads and Felt



E-Z Walk Pinch and Bite Pads



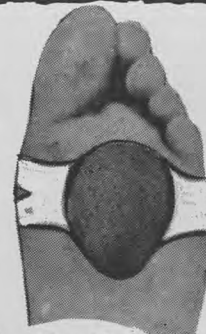
E-Z Walk Tongue Pads



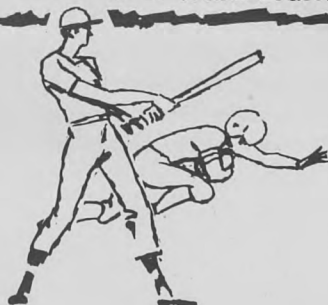
E-Z Walk Elastic Arch Band



E-Z Walk Heel Cushions



Elastic Met-Band



Write for Brochure and prices on complete line of E-Z Walk foot reliefs for athletes.

E-Z WALK CORP.

104 WEST 17th ST. NEW YORK 11, N. Y.

"An E-Z Walk for walking comfort"

Steve Witkowski Honored By Connecticut Writers

Latest honor for Steve Witkowski, head trainer at Wesleyan University, Connecticut, for 33 years, is his selection as a Gold Key winner by the Connecticut Sports Writers Alliance. The Writers select three a year, and Steve is the first trainer ever chosen.

Steve started as Wesleyan head trainer with no experience, and has more than justified the confidence of the athletic director who chose him. He got right at the job of educating himself for the position, has kept it up, and is the only man ever to be named head trainer for two U.S. Olympics teams (Melbourne and Rome). He has been vice-president and president of the Eastern Athletic Trainers Association, and served two years as District 1 director for the NATA.

Steve is equally well-known nationally among duck-pin bowlers, having been national singles champion and, at one

time or another, holder of six national records.

Cooperative Orthopedic Plan a Success at Rice

Rice University and its neighbor, Hermann Hospital, have had excellent results from a cooperative program which might well be emulated by other institutions in the nation. An article describing the utilization of the Hospital's orthopedic residents in the Rice athletic program appeared in the November 2, 1964, issue of *The Journal of the American Medical Association*.

Dr. Edward T. Smith, chief of the orthopedic service at Hermann Hospital, is team physician for Rice. His predecessor as team physician, Dr. Hugh C. Welch, has been an active member of the Hospital staff since 1925. Eddie Wojecki is Rice's head trainer.

The orthopedic residents, on a rotation basis, attend every football practice; they

THE COVER

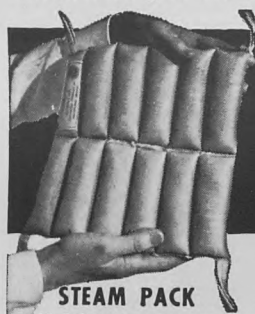
THAT a face mask doesn't always do the job it is supposed to do is graphically shown in this photograph, taken during the 1964 football season. The leverage exerted against the single bar on contact was sufficient to thrust the helmet both down and sideways, jamming the unpadded edge of the helmet on the player's nose and leaving his mouth completely unprotected. Smashing contact an instant later by a blocker or another tackler could have resulted in serious injury. It is perhaps superfluous to point out that wearing a mouth-guard would have been appropriate in this situation, too.

are available in the training room before practice, on the field during practice, and back in the training room after practice. There is also a resident assigned as team physician for all freshman games, at home or away.

Dr. Smith pointed out that most major athletic injuries fall within the realm of orthopedic surgery, so it is particularly appropriate for young orthopedic surgeons to participate in this way. The proximity of a major athletic program to an orthopedic training center and a close liaison between the orthopedic staff and the athletic director, coaches, and trainers are essential, of course.

Football Injury Film Scheduling Now Easier

When the film "A Case History of a Football Injury" was offered for showing without charge in the last issue of *The Journal*, Dr. Fred Behling found himself overrun with requests for bookings. He has since received another print of the film and has been able to reduce the log jam to a considerable extent. Trainers who would like to borrow the film and were discouraged earlier by the long waiting list will find the prospects much better now. The address: Dr. F. L. Behling, Palo Alto Medical Clinic, 300 Homer Avenue, Palo Alto, California 94301.



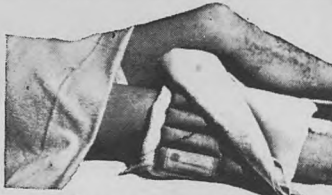
STEAM PACK

U. S. Pat. No. 2,710,008

Master Units automatically maintain Steam Packs in water at proper temperature — constantly ready for immediate use. No plumbing required. Console Models available for 8 and 12 packs; Table Models for 2, 4, and 8 packs.

EFFECTIVE MOIST HEAT EASILY APPLIED

At least 30 minutes of effective MOIST HEAT with each application. Hundreds of treatments from each Steam Pack.



Use on Neck, Shoulders, Back or Extremities

- Several players may be treated at the same time.
- No special technique or training needed.
- Moist heat with all of its advantages.
- Convenient, simple, safe, effective.
- Low cost investment

(Complete units—\$39.50 and up).

CHATTANOOGA PHARMACAL CO., INC.

2400 DAYTON BLVD., CHATTANOOGA 5, TENN.



HYDROCOLLATOR®

Steam
PACK

Send for literature
and prices



Your Skillful Hands...

can make the *difference* between top-performance and half-speed...a sound athlete, or one on the bench...a successful season, or one to forget.

The right products *in your hands*, can help you make the difference. Johnson & Johnson Athletic Tapes, and other training room supplies, are the result of over 75 years of research and manufacturing experience. They give you important features not available in other brands.

Johnson & Johnson

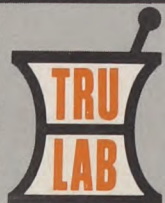
“ It was an exciting experience serving as track and field trainer at the Olympics, and watching the top athletes of 94 nations perform. A big help to me in Tokyo was Tru-Lab products . . . their large line of athletic pharmaceuticals is great for keeping teams in top shape. ”



Delmer Brown, one of the two trainers in track and field at the XVIII Olympiad in Tokyo, rates Tru-Lab products tops in their field. Brown, an instructor, trainer and track coach at East Texas State College in Commerce, Texas for 12 years, was formerly a trainer at Baylor University, Texas Technological College and Pittsburgh Pirates National League baseball team. Brown, a leading trainer and coach, was a member of the relay team which holds the world record in distance medley. He won recognition while an All American trackman at North Texas State University in 1937 and 1938.

Pictured above is Coach Brown, right, showing souvenirs of the Olympics to Jim Cody, Tru-Lab Products sales representative. Souvenirs pictured include the official flag of the Olympics which was presented by the governor of Tokyo, the official team badge, the medal from the mayor of Los Angeles, and the Olympic towel which was presented to each participant by the United States.

More and more professional and amateur sports teams have been switching to Tru-Lab athletic pharmaceuticals.



TRU-LAB PRODUCTS
division of Truett Laboratories

13450 HARRY HINES BOULEVARD • DALLAS, TEXAS 75234

represented
nationally by

