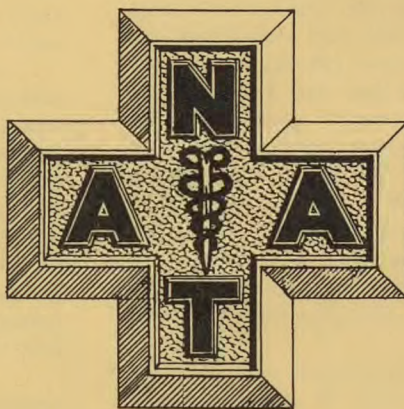


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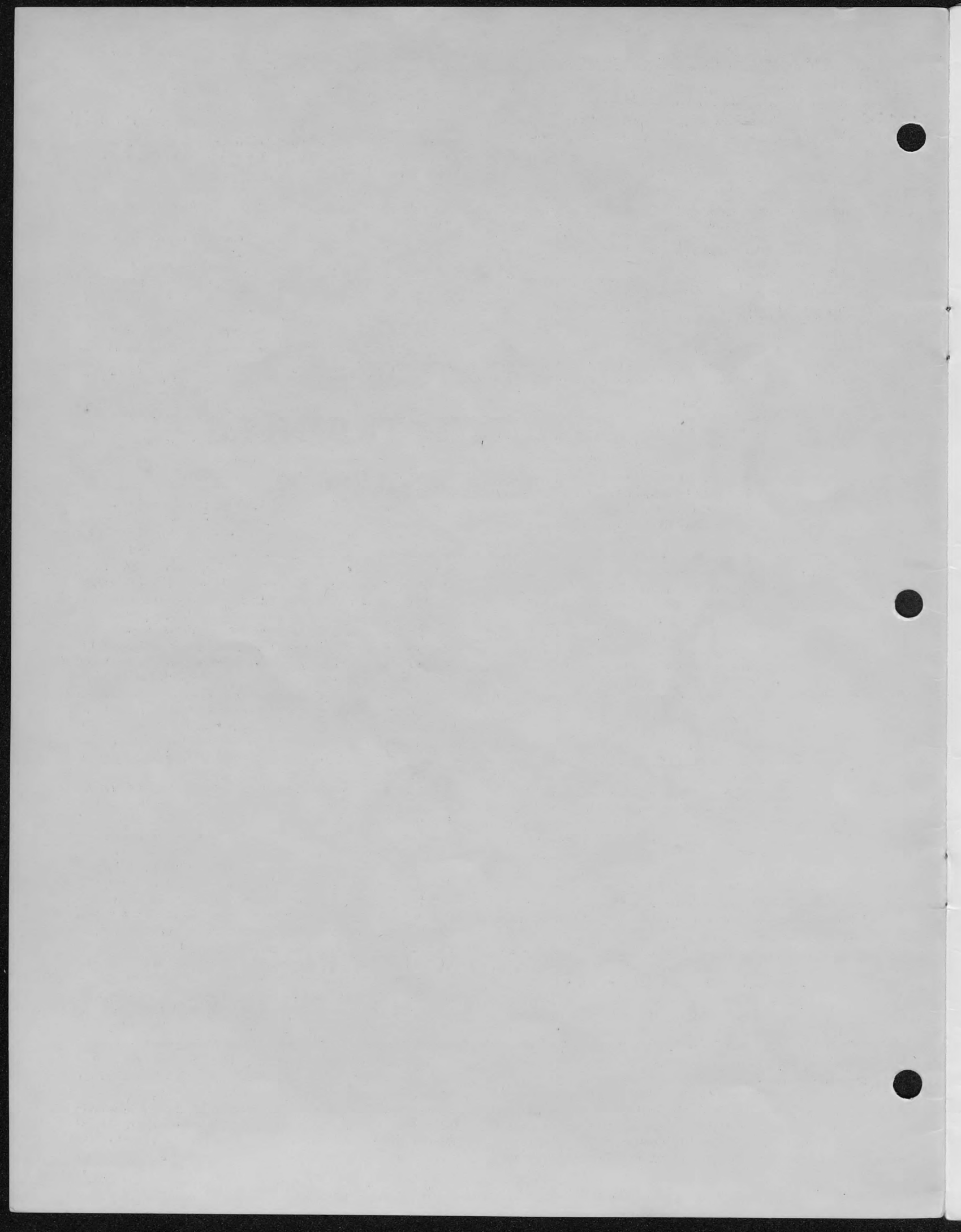
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KANSAS CITY, MISSOURI, JUNE 27, 28, 29, 1960



## LEGAL BASES OF LIABILITY FOR ATHLETIC TRAINERS

By HOWARD C. LEIBEE

The University of Michigan

Howard C. Leibee, Director of Physical Education for Men at the University of Michigan, has written and spoken extensively in the areas of liability for athletic injuries and negligent conduct of teachers, coaches, and other school personnel in the course of employment. He is the author of *Liability for Accidents in Physical Education, Athletics, and Recreation* published by the Ann Arbor Publishers, Ann Arbor, Michigan. Mr. Leibee is co-author of *Physical Education Handbook* and *Basic Book of Sports* published by Prentice-Hall, Inc., and *Sports Officiating* published by the Ronald Press.

Mr. Leibee completed his undergraduate work at the University of Colorado and taught physical education and coached in the public schools of that state 15 years before joining the staff at The University of Michigan in 1942. His graduate work has been done at Michigan. At the University he is in charge of the required physical education for men program.

It is perhaps safe to say that a desire of every person who makes athletic training his career is to assist in the development and maintenance of the finest athletic program possible—a broad base for participation, excellent facilities and equipment, a well-prepared staff, and good public relations not only with school authorities but the spectator-public as well. In his efforts to realize this desire, he may utilize his ability and preparation to their fullest extent only to see the entire scheme collapse because of the misuse of his judgment and/or trust.

The law in the United States affords special protection to certain groups within our educational systems, and holds them immune from liability for money damages arising from injury caused by negligence on someone's part. On the other hand, others in the educational field may, by virtue of their negligence, be brought to the blunt realization that all their material wealth has been made subject to the order of a court directing payment of damages as compensation for an injury or death. Added to this are the obvious consequences of an accident and a lawsuit: worry, loss of time, and inconvenience.

The safety of students participating in athletic programs is entrusted to those individuals charged with the administration and implementation of such programs and whether ultimate liability may be found in some legal action or only in a moral or public censorship, those individuals are bound to exercise a degree of care commensurate with the immaturity of their charges and the importance of their trust. The athletic trainer must be constantly alert to guard against accidents and injuries for not only is he in the best position to avoid them, but as has been seen, the immunity from legal liability enjoyed by governmental boards and agencies is not extended to the trainer.

It is, of course, true that in legal liability, negligence must be clearly proven. What then is negligence?

Essentially, the law of negligence deals with conduct—either action or inaction—which, it is claimed by the injured person, does not measure up to the standard of behavior required by the law of all persons in society. Briefly, that standard or measurement may be described as the manner in which a reasonably prudent person would act under the same or similar circumstances as those involved in the case before the court.

It is important to distinguish the field of negligence from both the "unavoidable accident or injury" and the intentional torts such as assault or battery or trespass. If injury results from conduct which was not intended to cause the injury and if that injury could not have been foreseen or prevented by the use of reasonable precautions, then the law regards the result as an unavoidable accident, and imposes no liability for damages caused.

In the field of intentional torts, negligence plays no part, since by definition, negligence implies the lack of intent to cause the injury or damage resulting to the plaintiff, and the failure to conduct oneself in conformity with the standard established by law for the protection of others against unreasonable risk of injury. The historical development of the law of negligence, in turn, has resulted in the development of a group of elements necessary to the successful maintenance of a suit based on negligence. These elements are, generally, as follows:

1. Duty to conform to a standard of behavior which will not subject others to an unreasonable risk of injury.
2. Breach of that duty.
3. A sufficiently close causal connection between the conduct or behavior and the resulting injury.
4. Damage or injury resulting to the rights or interests of another.

It can be seen from an analysis of these factors that negligence in the law is not necessarily based on mere carelessness, but on conduct or behavior which should be recognized by the person acting as involving unreasonable risk or danger to others. Ignorance, forgetfulness, or stupidity may be involved in a negligence action, **but negligence may also be found where the person acting has taken careful consideration of the consequences of his intended act and has acted in conformity with his best judgment, if that judgment is not in accord with the judgment a reasonably prudent person in his position would have exercised.**

Duty can perhaps be best described as an obligation which the courts recognize and enforce, arising out of the relationship between the parties involved in the law suit in question. And the duty, if owed at all, must be owed to this plaintiff—it must be personal, in a sense, to him.

As to the second element of a negligence cause of action—breach of duty—it is the element by which the defendant's actual conduct is measured against the legal standard of the reasonable person in an effort to determine whether the defendant, by his conduct, exposed the plaintiff to an unreasonable risk of harm. Whether the conduct was unreasonable is a question to be determined by the jury, since presumably the jurors represent a cross-section of society, and it is society's standard to which the defendant must conform. In their determination, the jurors consider a variety of factors, not the least of which is the community or social value of the action the defendant is attempting to do—a balancing of the risk to others against the value of the interest or action the actor is seeking to protect or advance. **Hence, doing a particular thing may be negligence on one occasion, proper on another.**

The so-called reasonably prudent person against whom the jury measures the defendant is, of course, a creature of the mind. He is an ideal, the good citizen who always looks where he is going; doesn't daydream while approaching a dangerous spot in the road; always waits for the train or bus to stop before getting on or off; never

Continued on page 2

**LEGAL BASES** (Continued)

second-guesses a stop light; and never pets a strange dog before he knows that the animal is gentle.

**No allowances are made for mental or temperament differences. A fool is liable for his folly, even though he did the best he knew how.** Only in the case of the very aged and of children is the standard relaxed. An immature child cannot be held to an adult standard simply because he cannot meet it. Consequently, a different standard is applied—that of what is reasonable to expect of individuals of like age, intelligence, and experience—making the standard much more subjective or personal to this individual.

As to those adults of superior knowledge by virtue of their professional experience or education, a somewhat higher standard of conduct may be required. Not only must such a person exercise reasonable care in what he does, but he is also held to have special knowledge and ability.

The relationship of trainer to athlete requires, generally, that the trainer act as a reasonably prudent person, carrying out the duties of the training profession, would act under the same or similar circumstances. If the circumstances existing at a given moment would cause the fictitious reasonably prudent person to take some action or refrain from conducting himself in some manner, and

the trainer fails to act or fails to refrain, then he has been negligent. If, however, no reasonably prudent trainer would have anticipated the occurrence of the event, or no reasonable precaution could have prevented the particular event, then there is no liability. It is obvious that if the whole athletic programs were abandoned, no "athletic injuries" could occur at all and there would be no need for athletic trainers. But neither would there be any education through athletics and in the balance of interests, the courts have found it necessary to limit the extent to which liability will be permitted to go.

The third element of a negligence action—causation—is generally divided into **proximate** or **legal cause**, and **cause in fact**. The latter of these—cause in fact—is that element of the negligence action which seeks to determine the factual relationship between the defendant's conduct and the plaintiff's loss. The question asked is: Did the defendant's conduct cause the plaintiff's loss or injury? The answer is for the jury to determine under proper instructions from the court. Both the defendant's acts and omissions may be significant, the failure to act under certain circumstances being as much the cause of the resultant damage or injury as positive conduct. In attempting to guide the jury in its findings, the courts have derived a test known as the "but for" test. Simply expressed, it states: If the injury would not have resulted

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## LEGAL BASES (Continued)

but for the defendant's negligence, then the defendant's negligence stands in casual relation to that injury. His liability is not necessarily determined by such a finding since other necessary factors may not be present, or some defense may exist. In applying the test, it must be remembered that if the event or injury clearly would have occurred without the defendant's act or omission, then the test is not satisfied.

As to the other causation factor—legal or proximate cause—it is merely the limitation the courts have put upon the defendant's responsibility for his conduct. The courts of this country, however, limit legal responsibility as a matter of policy, to those causes which are closely enough related to the result and of sufficient significance to permit the law to impose liability consistently with some social idea of justice and policy. Although the problem sometimes involves the presence of factual causation, generally it does not. "Proximate cause is a catch-all formula which conceals many problems," and the problem is frequently confused with the other elements of a negligence action such as duty, breach, or defenses.

The fourth element of a negligence action—damage or injury—is self-explanatory. Whereas in some fields of law no actual monetary or physical loss or damage need be shown to permit bringing a law suit (e.g., some types of libel and slander), a negligence action is not complete without proof of some damage to the interests of the plaintiff.

### A Reasonably Prudent and Careful Athletic Trainer—

1. Performs service only in those areas in which he is fully qualified and directed by medical personnel.
2. Assigns only qualified personnel to perform any service under his supervision.
3. Performs proper act in case of injury.
4. Secures medical approval for any treatment prescribed.
5. Keeps an accurate record of injuries, services rendered, and authorizations by medical personnel.
6. Permits athletes to return to sports activity following illness or serious injury only after securing medical approval.
7. Has medical personnel available at all contests and readily available during practice sessions.
8. Knows the health status of athletes under his supervision.
9. Is concerned with the protective quality and proper fitting of sports equipment worn by athletes.
10. In all his actions or inactions, he asks himself, "What would the reasonably prudent and careful athletic trainer do under these circumstances?"

## THE ARM STRETCH

DON FAULS

Trainer, Florida State University

Practically every exercise ever thought of is based on stretching. Every Trainer uses stretching as part of his daily work. Every athlete knows that he must use some form of stretching to get ready for participation. In baseball, stretching plays an important part in getting the pitcher ready for the game.

The stretching of the pitchers arm, before the game, can be one of the most important things that the Trainer can do for his team. It can save as many as twenty (20) pitches from the pitchers pre-game warmup. Those pitches saved, before a game, may give the pitcher that "little extra" he might need, late in the game.

This method of stretching any pitchers arm is divided into eight (8) parts. It is to be done in sequence. After using it a few times, you will find that any deviation from the set routine will be noticeable.

The player being stretched should be relaxed at all times. It is a passive stretching as the Trainer does all the work. In this discussion, we are using the right arm.

No. 1. The player is laying on his left side, knees flexed, facing the Trainer. His head is resting on his flexed left arm. You grasp the right wrist and bring the arm over his head. Now lay his arm across your flexed right elbow. Your right hand is on his Scapula, your left hand on his back. Your left elbow pushes against his Pelvic Girdle (Fig. 1). You then stretch his right side by exerting pressure on his Scapula with your right hand and against his Pelvic Girdle with your left elbow. What you are actually doing is pushing out with your elbows and in with your hands. This is repeated four or five times.

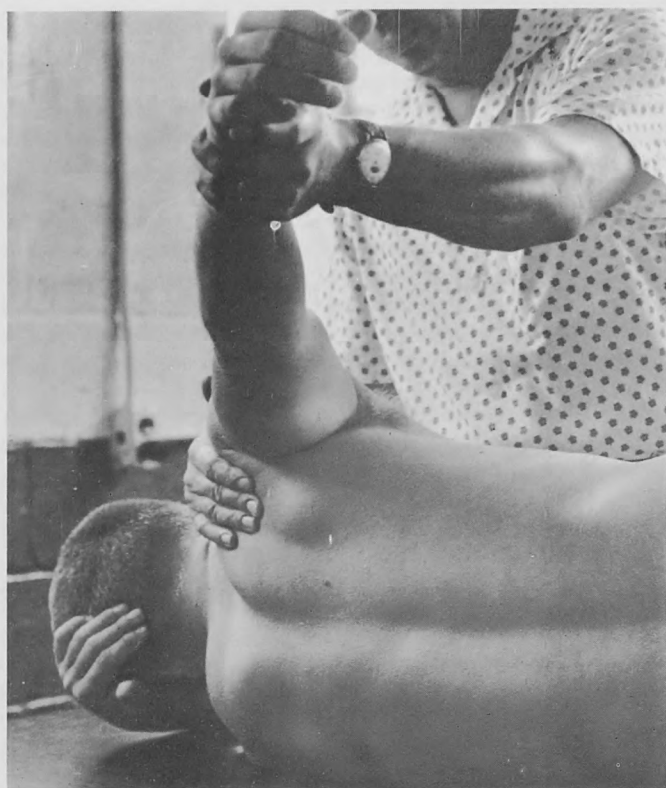


No. 2. Finishing step No. 1, flip his right arm with your right arm, catching his right wrist in your left hand. Shake his arm a few times to make certain it is relaxed (Fig. 2). With his right wrist in your left hand and your right hand on his Scapula, extend or push his arm away from you, four (4) or five (5) times.

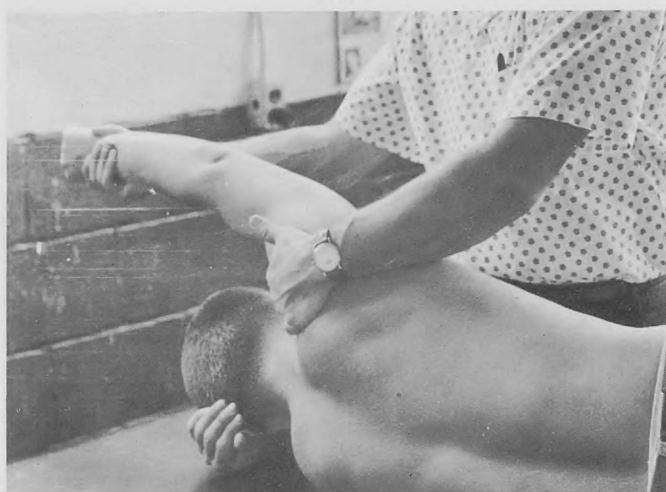
No. 3. Return to starting position of step No. 2. You now abduct or push his arm to the shoulder level. Transfer his wrist to your right hand. Your left hand is then placed on top of his right shoulder (Fig. 3). From this position, you extend his arm over his head, four (4) or five (5) times. After each repetition, shake his arm a few times to promote relaxation.

No. 4. His right arm is then returned to your left hand, where you grasp him by the wrist. His elbow is flexed. Grasp his right elbow with your right hand (Fig. 4). Rotate his shoulder girdle, both clockwise and counter clockwise, ten (10) or fifteen (15) times. Your right hand does most of the work as you push his arm around. Make certain that you are doing all the work. He will usually try to help you do this movement.

Continued on page 4



(Fig. 2)



(Fig. 3)



(Fig. 4)

Note: Step No. 4 finishes the stretching with the player lying on his side. The player now lays on his back, near the side of the table, with his right arm hanging over the side of the table.

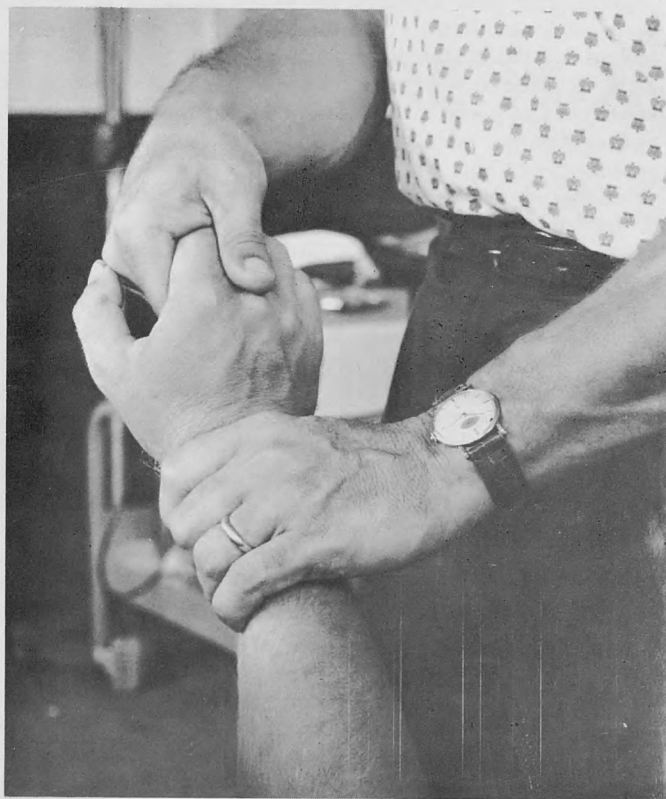


(Fig. 5)

No. 5. Your position is on the side of the table that his arm is hanging over (Fig. 5). You will have to bend down or kneel down to get your left arm under his right arm, with your left hand on his chest. You grasp his lower arm, just below the elbow, with your right hand. Using your left arm as a fulcrum, extend his upper arm by pushing with your right hand, being certain that he's feeling the stretch in his anterior shoulder muscles, rather than in the elbow. Chances are you will have to feel your way through this one, depending on the player to tell you when he is getting the stretch in the right place. It is important to note that you do not cause undue pressure on the elbow, as it serves no useful purpose and could do some harm.



(Fig. 6)

**THE ARM STRETCH** (Continued)

(Fig. 7)



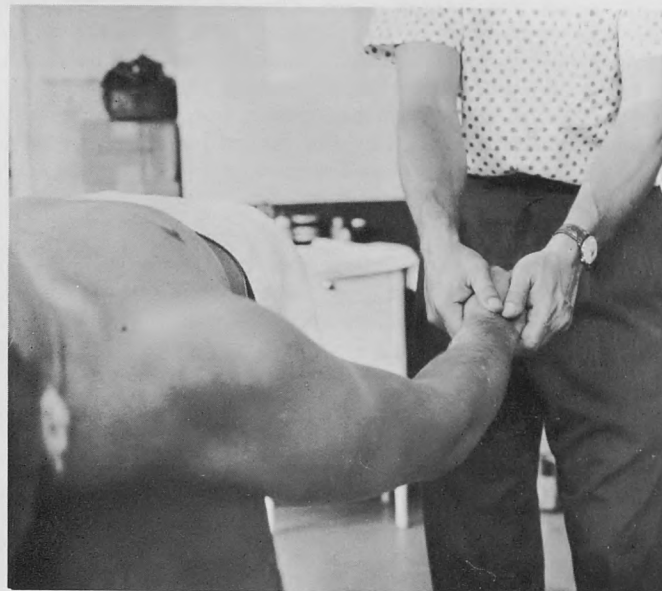
(Fig. 8)

No. 6. This is just a rotation of his elbow (Fig. 6). Your left hand holds the elbow, the right hand holds the wrist and does all the work.

No. 7. (Fig. 7) This step amounts to putting the wrist through a range of motion, a few times. You can also stretch the fingers (Fig. 8).

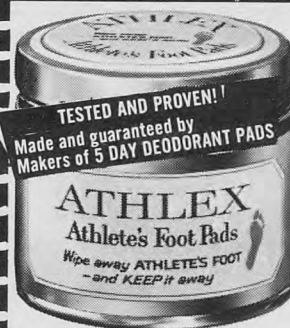
No. 8. (Fig. 9) Grasp his right hand with both of your hands and shake his arm four (4) or five (5) times.

Past experience with this particular stretching of the arm, has proven very beneficial. It is passed on with the idea that it may prove useful to others.



(Fig. 9)

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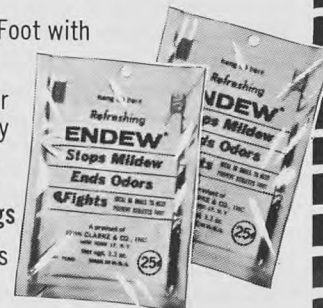
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## RECOGNITION OF COMMON SKIN DISORDERS

JAMES H. McCREARY, M.D.  
Consultant Dermatologist  
Ohio State University  
Columbus, Ohio

I would like first of all to classify the common skin conditions familiar to the training table. Not all of the skin problems will be the result of trauma. Although you are dealing with the vigorous healthy male he is subject to diseases of the skin of hereditary, metabolic, infectious and neoplastic nature, like the rest of his colleagues.

As I mentioned trauma first I might just as well start with the traumatic conditions.

### FRICTION

The irritations by friction may be avoided by proper fitting of gear and foot wear, but this cannot always be maintained. Blisters and abrasions, as you know, do occur. To prevent this in some degree I might suggest that on tender skin 5% tincture of Benzoin in zinc oxide ointment be applied each night. This has been most successful when applied to soles and palms to toughen skin of athletes. Some boys may have inherited a thin, dry and easily irritated skin, made worse in winter by frequent bathing with soap and water. The boys may be protected by the application twice daily of a cream containing 1% Vitamin A Palmitate in Nivea cream and the restriction of soap and water baths during the winter months.

If blisters do occur, I feel that lotions and wet dressings of Burows solution or boric acid or even vinegar solution may be indicated, but if the blister is tense and tender it might be opened, drained and a protective dressing with zinc oxide or a soothing menthol-phenol paste applied.

**Sunburn** may be a nuisance in early spring. Sun-filtering creams or lotions do not always work. It can be prevented best by increasing the exposure gradually but if blistered, wet dressings, lotions or protective dressings again are helpful, as they are with most blisters.

### ALLERGIC REACTION

Occasionally you may notice patches of blisters having straight line borders or lines of blisters suggesting a contact dermatitis. Adhesive tape, shoe leather dye or poison ivy dermatitis might be recognized in this way. A lotion or cream containing  $\frac{1}{2}\%$  hydrocortisone should be helpful when patch tests with the suspected materials are positive.

Urticaria or hives do not always mean that the man has eaten a food or inhaled a dust to which he is allergic. The flat-topped, pale centered and rounded bordered wheals of urticaria may mean that he is taking his responsibility too seriously or he is having difficulty with other emotions. This is particularly true if the hives have been recurrent or persistent over a three week period.

A short course of cortisone or another of the corticosteroids should take care of the acute hives. Chronic hives may require sedation, tranquilization or psycho-therapy.

### INFECTIONS

Not long ago, but before sulfa drugs or penicillin, every little scratch or cut was a potential killer through blood poisoning or lymphangitis. Fortunately now we can clear infections almost before they get started. Iodine neutralized with alcohol is still a good first aid remedy, but it will not take care of the persistent rather stubborn bacterial infection called impetigo contagiosa or a boil (furuncle).

**Impetigo** is a blistering eruption. The blister top is delicate and gets knocked off early. It dries to form a honey-colored, loosely attached crust, which can be detached by the slightest flick of a finger nail. When the crust is removed we see a very flat, slightly moist, red base, very superficial in the top layers of the skin. New lesions develop very rapidly so that a dozen or more may appear overnight. An antibiotic lotion or cream may be reinforced if necessary by a systemic antibiotic by mouth or by intra-muscular injection. Impetigo has long been associated with filth. Dirty uniforms or floor mats for tumbling and wrestling should be cleaned regularly. Bacteria are not apt to be found on clean equipment.

**Furuncles** or boils are bacterial infections involving the hair follicles. In the beginning at least a hair may be seen piercing the center of a pustule. The core is made up of necrotic slough of the wall of the follicles and sebaceous glands along with cellular and connective tissue elements of defense in the debris. A single or a number of follicles may be involved. If the follicular infection gets deeper and wider, with more than one follicle involved, it is called a carbuncle. A poultice day and night of 40% Ichthyol in aquaphor may be necessary to draw the infection to a local point. The antibiotics systemically are just as effective as in impetigo.

### FUNGUS

**Athletes foot** or small plants whose seeds or spores are found in the dust, lakes, streams and even in our shower rooms are responsible for disagreeable infections of the feet. Cracks or blisters between or at the sides of toes and soles of the feet suggest the diagnosis. The spores and branching filaments of the plant may be seen in the blister tops and scrapings of scales at edges of the sores, when viewed under the microscope. The diagnosis of fungus infection should not be made unless microscopic study reveals the organism.

**Ringworm** on the arms, legs or trunk, the fungus infection may appear in scaling red rings. A similar eruption called Pityriasis Rosea is often confused with ringworm. Microscopic examination will not reveal the fungus in Pityriasis Rosea.

**Tinea Cruris** when the fungus gets into warm moist areas of the skin it flourishes and causes considerable itching. This is true of tinea cruris or "jock itch" where the fungus in the groin can slow our athletes.

All the fungus infections mentioned above can be cleared by the new Griseus Fulvin oral medication or the conventional undecylenic acid solution, creams or powders. A rather disturbing type of fungus infection called tinea versicolor does not lend itself to the new oral medicine. This appears in round to confluent plaques having a very branny scale and may appear red in the spring and turn to brown or white during the fall and winter. At times itching may be rather severe. It is usually seen over the shoulders and upper trunk. It will respond to the undecylenic acid solutions.

### VIRUS INFECTION

**Molluscum contagiosum**—Because of close personal contact, athletes are prone to receive and pass on contagious viral infections. Small, smooth, round bodies with a rough, white, umbilicated center characterizes the molluscum contagiosum. It looks like a wart except for the smooth rounded side-wall. They itch at times and during the scratching, new lesions are implanted. The number may reach several dozen. These wart-like lesions may be burned off by the electric needle or destroyed by forcing iodine into the centers twice daily with the point of a toothpick.

Continued on page 8

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**Warts** (or verrucae) are important when they involve the planter surface of the feet or palmar surface of the hands and fingers. There is no specific and satisfactory treatment of warts. Castor oil inunction or application of strong acid plasters or solutions with collodion may work but even with electric cautery several warts may replace the one removed.

**Venereal warts** or warts on the penis or scrotum are particularly florid. They are, however, more susceptible to podophyllin 25% in alcohol and one treatment is sometimes sufficient.

**Chicken-pox** or most virus infections having blisters will demonstrate a central umbilication or dell within the blister top. This is true of chicken-pox, small-pox and herpes zoster (shingles) and herpes simplex (the common cold sore or fever blister). Chicken-pox characteristically occur with the appearance of new blisters in crops every second or third day. The old lesions continue through blisters to erosion and then crusting. Early the blisters are seen on the scalp, arms, legs and trunk in chicken-pox. In small-pox quite a number of the blisters will be seen first on the face and not in crops.

**Herpes simplex** or fever blisters usually occur in a single group but may be multiple. It may occur on the penis and cause some confusion with syphilis if the roof of the blisters have ruptured. Syphilis (except in the infant) does not have blisters. Tincture of iodine solution neutralized in a few minutes with an alcohol sponge several times a day will dry the herpes about as well as anything.

## METABOLIC

**Acne vulgaris**—Participation in athletics appears to worsen many acne cases. The reason is not clear. Perhaps it is as simple as the wiping of a sweaty arm across the face or not using enough soap and hot water after a grimy sporting event. Basketball seems to be the worst. Blackheads or comedones should be removed by the proper instrument and the follicles opened by hot toweling or chemical irritants—usually in the form of a sulphur or resorcin mixture. Vitamin A and Thyroid by mouth seems to help lessen the oil in the skin.

**Fatigue**—Mental fatigue is more of a problem than physical fatigue when we consider skin diseases of the athlete. Taking life in general and themselves in particular too seriously, creates a drain on their stress hormone reserve. The blood vessels of the skin react to this situation in such a way that a thickening or weeping of the skin develops. We call this reaction eczema or neurodermatitis. The thickening of the skin accentuates the markings of the skin rhomboids and we call it lichenification. The weeping usually occurs in round patches resembling coins in outline and so it is called nummular eczema. In general, the lichenification occurs on the flexural areas while nummular eczema involves the extensor surfaces. Either type may become generalized with itching so intense that it prevents study and sleeping, creating more frustration and more fatigue. The treatment of neurodermatitis is directed toward restoring the stress hormone balance by the use of cortico-steroids, sedation, long rest periods and perhaps psychotherapy. Locally, the skin is protected with cortico-steroid creams or lotions, avoiding irritation with soap and water by bathing with oil or cleansing lotion, vinegar baths, tar baths and soothing menthol-phenol paste.

**Psoriasis**—The cause of psoriasis is unknown. It does seem to resemble some of the virus diseases in some respects. At the same time, it is influenced by the emotional state of the individual and the climate. It seems

to do better during the warm summer months. The lesions of psoriasis are characterized by their having a rather thick lamellous silvery white scale on a round or oval red base, rather superficial in the skin, particularly of the scalp, elbows or knees. Actually the lesions can come anywhere on the body, but the above sites are typical. The best treatment for psoriasis is still that of including ultra violet light irradiations after the applications of a 1% to 5% crude coal tar paste which sensitizes the skin to sunlight or ultra violet light irradiations.

## NEOPLASMS

**Moles**, which are situated where chronic irritation by pressure of weight bearing or friction of gear may occur, should be removed—such as soles of feet, belt-line, etc. Acute irritation which is unlikely to be repeated often is not so important. Premalignant lesions such as leuplakia or cutaneous horn and keratosis may be recognized as you examine the mucous membranes and skin of these boys. Leupoplakia will appear as a whitish thick adherent scale or membrane on the lips, tongue, or cheek, particularly of the heavy smokers. A cutaneous horn will be found anywhere on the skin as a projecting papule having a horny tip but most likely a shiny, smooth, round red base. It must be differentiated from a wart.

Keratosis appear as thickening patches of horny, scaling and slightly elevated papules seen anywhere on the skin, but most likely on the palms and soles. Many of these are the results of arsenic taken by mouth in the form of tonics when the individual was a youngster. These keratosis are likely to become malignant in later years. When recognized, they should be removed by the electric needle.

Malignant lesions will most generally have a long history of a year or more, appearing with central ulceration and not healing. Each may have a rather firm base which at times suggest the appearance of pearls at the borders. Little, fine, branching blood vessels run over the irregularly rounded surface. Any lesion which does not go away, which is rather indolent, should be removed and examined under the microscope.

Leukoplakia, keratosis and the cutaneous horns have specific microscopic appearances. Sometimes, giving up tobacco in any form will cause the leukoplakia to disappear without benefit of surgery. With local Procaine anesthesia a biopsy can be taken and the tissue examined for malignancy in the physician's office. It is a simple procedure and may be life-saving. If the biopsy proves to be malignant then surgery is performed.

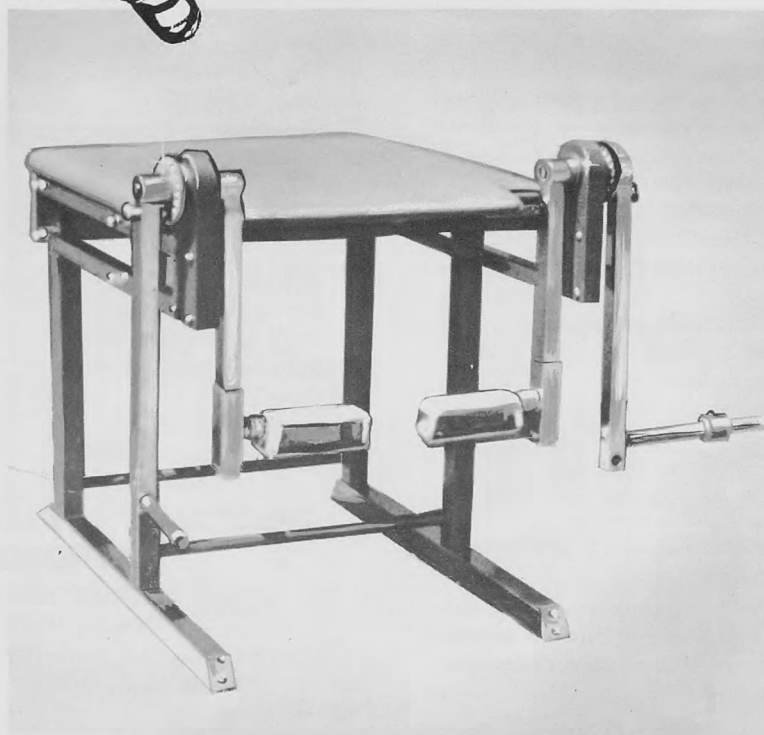
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If you have been using the Bench Technique please let Karl K. Klein, Assistant Professor, Supervisor Physical Education, Rehabilitation Laboratory, know. He will contact you later for additional information that we are seeking in injury reduction.



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By EDDIE WOJECKI

Athlete Trainer, The Rice Institute  
Houston, Texas

1. Prognosis—Predication of course and end of disease.
2. Diagnosis—Recognition of an injury or disease from its symptoms.
3. Edema—Accumulation of serum in the cellular tissue.
4. Areolar tissue—Connective tissue.
5. Avulsion—The wrenching away of a part.
6. Arterial Bleeding—Bleeding from artery (Spurts).
7. Venous Bleeding—Bleeding from vein (Even Flow).
8. Ligaments—A band of fibrous tissue binding parts together.
9. Tendons—A white fibrous tissue, attachment of muscle.
10. Fascia—A fibrous tissue covering muscles and other tissues.
11. Hyperemia—Excessive amount of blood in any given part of body.
12. Necrosis—Death of tissue.
13. Contusion—Actual bruise.
14. Hematoma—A blood tumor.
15. Concomitant—Accompanying, as symptoms.
16. Fibroblastic Proliferation—Cells forming new tissue.
17. Ecchymosis—Black-blue discoloration.
18. Trauma—A direct blow.
19. Meniscus—Inter-articular fibro-cartilage.
20. Cartilage—Gristle or non-vascular elastic tissue softer than bone.
21. Furunculosis—A systemic condition favoring boil formation.
22. Exostosis—An abnormal outgrowth of bone.
23. Extravasation—An effusion of fluid into the tissues.
24. Cellulitis—Inflammation of cellular tissue.
25. Acromion Process—Process of the acromia-clavicular joint.
26. Absorption—To suck up as through pores.
27. Aggravate—To make worse.
28. Insertion—Point of attachment of a muscle.
29. Muscle Tone—Normal contractility and promptness with which muscles respond to stimuli.
30. Antibiotic—A substance which interferes with the growth or multiplication of Bacteria or Viruses, usually derived from other micro-organism. (Ex. Penicillin, Streptomycin).
31. Bilateral—Pertaining to both sides of the body.
32. Contraindicated—Forbidden by a peculiarity of the disease.
33. Differential Diagnosis—The comparison of a disease with others which resemble it, to exclude the presence of the latter.
34. Etiology—The science of causes especially of disease loosely used to mean "cause" or "causative agent".
35. Hematology—The science of the blood, blood forming organs, and their diseases.
36. Malignant—Dangerous to life, virulent or invasive of a tumor; tending to invade adjacent tissues and to spread to distant parts of the body.
37. Palliative—Affording relief, but no cure.
38. Peritoneum—Thin, smooth membrane covering the abdominal organs and lining the internal abdominal wall.
39. Therapy—Treatment. Therapeutics is the science of a medical treatment.
40. Unilateral—Pertaining to one side of the body.

Names—Adjectives or affixes commonly used to designate body parts or organs.

- |  |  |
|--|--|
| 1. Head—Cranium, Cephalic.                   | 12. Liver—Hepatic, Hepato.               |
| 2. Eye—Ocular, Ophthalmic.                   | 13. Kidney—Renal, Nephric, Nephro.       |
| 4. Ear—Auricle, Oto.                         | 14. Urinary Bladder—Cysti, Cysto.        |
| 5. Nose—Nasal, Rhino.                        | 15. Intestines—Enteric, Entero.          |
| 6. Throat—Parts of—Pharynx, Larynx, Trachea. | 16. Testicle—Testicular, Orchic, Orchid. |
| 7. Mouth—Stoma, Oral.                        | 17. Arm—Brachial, Brachid.               |
| 8. Lungs—Pulmonary, Pneumo.                  | 18. Foot—Pedal, Podalic, Pod.            |
| 9. Chest—Thorax, Thoracic.                   |  |
| 10. Heart—Cor, Cardiac.                      |  |

Prefixes:

- |                             |                             |
|-----------------------------|-----------------------------|
| 1. Adero—refers to glands.  | 8. Myo—Refers to muscle.    |
| 2. Arthro—refers to joints. | 9. Neuro—Refers to nerves.  |
| 3. Derma—refers to skin.    | 10. Osted—Refers to bone.   |
| 4. Dys—Disordered, Bad.     | 11. Phlebo—Refers to veins. |
| 5. End—Inside.              | 12. Pyo—Refers to pus.      |
| 6. Hema—Refers to blood.    | 13. Post—After.             |
| 7. Hydro—refers to water.   | 14. Pre—Before.             |

Suffixes:

- |                              |                             |
|------------------------------|-----------------------------|
| 1. Algia—Pain.               | Flow.                       |
| 2. Dynia—Pain.               | 8. Osis—Abnormal condition. |
| 3. Itis—Inflammation.        | 9. Otomy—Cutting into.      |
| 4. Logy—Science.             | 10. Phobia—Fear.            |
| 5. Pathy—Abnormal condition. | 11. Uria—Excreted in Urine. |
| 6. Ptosis—Falling.           |                             |
| 7. Rrhea—Discharge,          |                             |

## LIGAMENTOUS PERONEAL NERVE SYNDROME

### REPORT OF A CASE

Max M. Novich, M.D.

(Reprinted from the Journal of the Newark Beth Israel Hospital, Newark, N. J., October 1958 Issue—Vol. IX, No. 4, Page 277.)

Traction injuries to the external popliteal nerve with involvement of the ligamentous structures of the knee are sufficiently rare to be of interest. Usually they result from severe lateral (adduction) trauma to the knee occurring during industrial accidents, traffic accidents, or football injuries. The terminology describing this injury is inexact; however, it is best described as the ligamentous peroneal nerve syndrome.

### CASE REPORT

A healthy male, 16 years of age, was admitted to the emergency room of the Newark Beth Israel Hospital at 6:30 p.m. on September 13, 1957. The injury occurred 30 minutes previously during a football game when the patient was engaged in defensive play in the backfield. An opposing lineman threw a cross-body block across the patient's left leg and knee. The knee twisted outward and the patient heard a snap. He fell backward to the ground and felt immediate pulling pain over the knee. The knee began to swell at once. He was assisted to his

Continued on page 11

**LIGAMENTOUS** (Continued)

feet and hopped off the playing field. At this time he was able to move the knee in flexion and extension.

The patient was in slight distress when seen soon after admission. There was pain and swelling in the left knee and ecchymosis of the leg. The knee was warm and tender laterally from 10 cm. below to 10 cm. above. Function was fairly good. Radiographic examination showed no evidence of fracture or dislocation.

The admitting diagnosis was severe contusion of the left leg and thigh, possible tear of the lateral cartilage, and sprain of the left knee.

Treatment included elevation of the affected leg in extension, application of an icebag to the knee and thigh, and sedation.

On the following day there was numbness on the top of the foot and inability to move the foot in dorsiflexion. The diagnosis of peroneal nerve involvement was made at this time. A footboard was prescribed to prevent foot-drop. Two days after admission there was increasing tenderness and marked edema of the inner and outer aspect of the knee. There was severe ecchymosis on the outer aspect of the leg, knee, and lower thigh.

Neurological examination by a consultant confirmed the clinical impression. There was no dorsiflexion of the left toes and foot and no eversion of the foot, but there was analgesia of the dorsum of the foot. The clinical impression was that of left common peroneal nerve contusion. Rest and administration of vitamins and steroids was recommended but the steroids were to be omitted if surgery was contemplated.

The patient was given 1000 mcgm. Vitamin B<sub>12</sub> daily. The icebags were discontinued and warm applications of magnesium sulfate were substituted. Because of a temperature of 100° F., penicillin, 300,000 units, was given twice daily.

On the fourth hospital day the knee was aspirated under local anesthesia and 30 c.c. of blood was withdrawn. Hydrocortisone, 25 mg., and hyaluronidase, 150 TRU, were injected intra-articularly. The marked adduction of the leg at the knee joint confirmed the presence of a torn lateral ligament. Surgery was recommended.

Neurological examination on September 19, sixth hospital day, revealed no change in the peroneal paralysis. Medial mobility of the leg was noted and it was suggested that the nerve be explored during any surgical repair of the knee. The patient was examined by another orthopedist, in consultation, on the following day. The physical findings were confirmed as was the diagnosis of torn lateral collateral ligament with contusion of laceration of the peroneal nerve. It was agreed that surgery was indicated for exploration of the nerve and repair of the ligament.

Surgical Course: An arthrotomy was performed under spinal anesthesia by the author assisted by the neurosurgeon. The approach was through the lateral aspect of the knee joint. This first operation was on September 25, twelve days after injury. It was found that the lateral articular capsule was torn off at its attachment to the tibia, and the tendinous insertion of the biceps femoris tendon was avulsed from the fibular head. When the torn capsular edge was lifted clots of blood were exposed

Continued on page 12



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**LIGAMENTOUS** (Continued)

and removed from the lateral compartment of the knee joint. The lateral meniscus was intact. The torn capsule and avulsed biceps tendon were sutured to their normal anatomic sites. The peroneal nerve was completely avulsed and its proximal end was retracted into the posterior thigh. The distal end was neuromatous for about one inch. The neurosurgeon sutured the ends of the divided nerve in juxtaposition to each other. He suggested that a neuroplasty be performed at some later date. A padded long leg cast was applied with the knee in 150° flexion. The patient made an uneventful recovery and was discharged on October 1, eighteen days after admission, ambulating with crutches.

The patient was seen in the office three weeks post-operatively, at which time the cast and sutures were removed. The left foot was held in equinovarus. There was no instability of the knee joint and the knee could be flexed to 90°.

On October 17 he was readmitted to the hospital and the following day surgery was performed under spinal anesthesia. The previous surgical scar was excised and the lateral aspect of the knee exposed. The repaired structures had healed well. The distal end of the common peroneal nerve was seen at the lower aspect of the lateral knee joint; it was bound in scar tissue and there was a large neuroma. The proximal end of the common peroneal nerve was found in the popliteal space; there was dense scarring and a distal neuroma. Approximately 5 cm. of the distal end of the proximal nerve segment was fibrotic. The nerve ends were fully mobilized. There was a gap of about 3 cm. between neuromas, and the neuromas were resected. Good funiculi were identified distally. Proximally, multiple resections had to be performed to get beyond the area of intraneural fibrosis. Good funiculi were finally identified. The gap between nerve ends was 10 cm. and, in order to bridge it, the proximal end was mobilized about half way up the thigh. It was possible to bring the nerve ends together with the knee flexed at 90° and the hip flexed at 180°. A neuroplasty was performed and plaster was applied with the knee in 90° flexion. Pathological reports on both neuromas noted intraneural and perineural fibrosis and chronic inflammation. The patient recovered uneventfully and was discharged on November 8, ambulating on crutches. The leg cast was removed by the neurosurgeon one month postoperatively and a short leg brace was applied.

Clinical Course: On December 18 outpatient care was resumed. Physical therapy was administered at regular intervals. Examination on February 24, 1958, revealed that the patient had full strength in the hip and knee and full range of motion. He did not limp and was able to lift 35 pounds with the quadriceps. There was no motion in the dorsiflexors and everters. There was sensory numbness in the lower left lateral leg and over the dorsum of the foot. Sensory perception was present along the inner and outer aspect of the left foot and through the proximal and medial aspects of the leg. The patient was wearing the drop-foot brace, without which the foot was held in equinovarus.

Current Status: On June 5, 1958, the condition was essentially unchanged. It is planned that a Lambrinudi foot stabilization operation will be performed a year hence. The prognosis for full recovery must be guarded.

**SUMMARY**

A case of ligamentous peroneal nerve syndrome in a young male is presented.

**RESEARCH: A Series of Case Study Reviews of the Non-Effectiveness of Progressive Resistive Exercise for Reestablishment of Ligament Stability.**

KARL K. KLEIN

Asst. Prof. Physical Education

University of Texas

F.A.C.S.M., F.A.P.M.R.\*

The utilization of Progressive Resistive Exercise as a restorative factor in the rebuilding as well as building muscular strength to the involved structures has been frequently discussed and utilized in the exercise program for returning the individual to normal function as well as athletic participation.<sup>1, 2, 3, 4, 5, 6</sup> A review of the existing literature that is usually available to the trainer as well as coach indicates a sparseness of information dealing with the effects of such exercise as it might be related to the problems of ligaments, strengthening effect as well as restoration of stability following ligament injury, where the test signs give evidence of weakness.

Due to the nature of the ligament structures, which under ordinary circumstances are non-elastic<sup>7</sup>, it is more than likely that the involved structures will not be changed or influenced through the process of exercise although it is an accepted thesis that the density of ligament structures will be increased as is the density of the surrounding musculature when progressive exercise is administered. At the same time we must be aware that some types of exercise, where maximal ranges of motion are carried out, may tend to stretch the ligament in the muscular development process thus totally weakening the integrity of the knee when the intent was to strengthen the structure. As for example, in the complete full knee bend the anterior fibers of the medial and collateral ligaments are placed on a full stretch therefore causing a stretching of a non-elastic tissue which results in a weakened structure if the particular stretching process continues over a period of time. The same condition of ligament weakness may also be enhanced if repeated injury is sustained through contact forces where efforts to add stability to the joint have not been made through progressive exercise application. Not that the specific exercise will have any particular effect in ligament restoration but the added muscular strength will aid in sustaining against the force that is applied where the condition of weakened ligaments is present.

**Purpose of the Study**

During the past four years the Physical Education Rehabilitation Laboratory at the University of Texas has had the opportunity to work with a large number of students with varying degrees of knee injury that was largely obtained in high school and university athletics. The main objective was the restoration maximal structural support for joint stability<sup>8</sup> and function in activity as well as to acquaint the student with his particular problem so that he could best live with the particular problem. Progressive Resistive Exercise techniques were utilized in this process.

Previous to the exercise program the following information was recorded about each individual case: history of the problem; strength measurements of the quadriceps

\* Fellow American College of Sports Medicine

Fellow Association for Physical and Mental Rehabilitation

Continued on page 13

**RESEARCH:** (Continued)

and hamstring musculature and the status of the ligament structures as to their stability. The accepted tests<sup>9</sup> for ligament structures were utilized to obtain information concerning ligament status, i.e., the adduction test for the medial and lateral collateral ligaments and the Drawe test for the cruciate ligaments.

Consultation with the Student Health Center at the University as well as with the family physician was made concerning each case.

**Study Objective:**

1. This phase of the total study was to evaluate the effectiveness of the use of progressive resistive exercise in reestablishing ligament stability of the involved knee structure.

**Procedures:**

1. The Adduction, abduction tests were administered to determine signs of lateral and medial collateral ligament weakness or stability. If there were signs of ligament weakness the information was recorded on the individual record card. No attempt was made to measure the exact amount of lateral and/or medial degrees of motion but weakness was recorded if signs of abnormal motion were noted. If there was no abnormal motion the ligaments were considered as normal. Bilateral testing was done for both the involved and uninvolved knee.
2. The Drawer tests were administered to determine signs of anterior or posterior cruciate weakness or stability. If there were typical signs of weakness this information was recorded on the individual

record card. No attempt was made to measure the exact amount of anterior and/or posterior degrees of motion but weakness was recorded if signs of abnormal motion were noted.

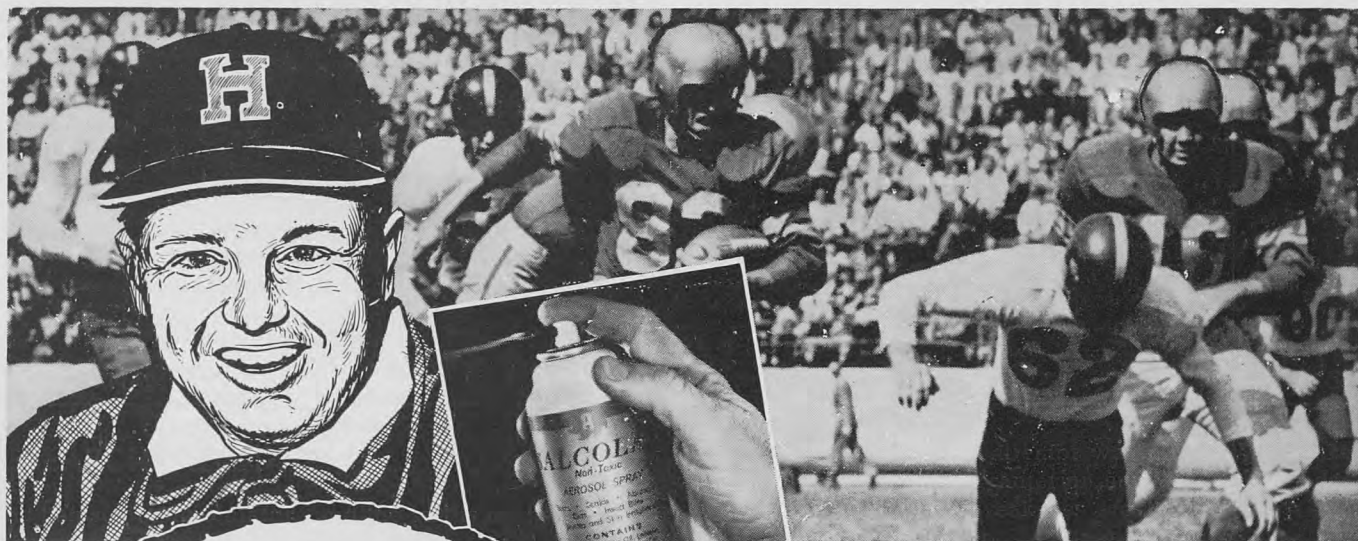
**Discussion and Analysis:**

A total of 40 cases were used in this study, 20 post injury and 20 post operative, and in all cases ligament weakness was only demonstrated on the involved side.

The basic progressive resistive exercise program as described in reference No. 8 was utilized with the majority of cases dealt with. This program was a modification of the "Power System" as described by MacQueen and revised by the author. Due to the fact that the revision of the exercise system used was made, during the four-year period in which this data was gathered, some of the students used a modification of the Oxford Technique as described in reference No. 3. In some cases the system of three sets of 10 maximum lifts was used where excessive ligament instability was present and the "Power System" seemed to cause anterior-posterior slipping during the increase loading phase of the program. These changes were made as a result of questioning and observation of the student during the initial exercise periods. In all systems an exercise series of light loading, increases repetitions was given for muscular endurance quality.

It is to be noted that both the quadriceps and hamstring muscular groups were exercised under the same system except under a total reduced loading determined by the strength status of the musculature at the time of original testing. The present evidence available from the strength testing phase of this study, as based on 44 post injury

Continued on page 14



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**RESEARCH:** (Continued)

cases and 36 post operative, shows that the hamstring musculature seems to deteriorate and lose strength at about the same relationship as the quadriceps when the exercise program is delayed over a period of time therefore equal emphasis of exercise was stressed. It is to be further noted that the average hamstring musculature is about 60-62% of the strength of the average quadriceps and therefore the loading factor has to be adjusted accordingly.

The concepts of progressive resistive exercise was maintained in all exercise programs but systems were changed on the basis of system reevaluation as well as the need of the student based on the ligament status of the individual case.

**Ligament Weakness Distribution**

Post Injury Cases Ligament Weakness					Post Operative Cases Ligament Weakness				
Leg Injured	Med.	Lat.	Ant. Cruc.	Post Cruc.	Leg Injured	Med.	Lat.	Ant. Cruc.	Post Cruc.
L	x				R	x			
L	x				R	x			
R	x	x	x		L	x			
R	x				R	x			
L	x	x	x		L			x	
R	x	x			L	x		x	
L	x	x			L			x	
R	x				L	x	x	x	
L	x	x			L			x	
L	x				L	x			
R	x	x	x		R			x	
R	x		x		R	x			
L		x	x		L	x	x	x	
L	x	x	x		L	x	x	x	
R	x	x	x		R	x	x	x	
L	x	x	x		R	x	x	x	
R	x				R		x		
R	x	x			L			x	
R		x			R	x	x	x	
L	x		x		L	x	x	x	

**Summary of Ligament Weakness Distributions:**  
**Post Injury Cases**

Total Cases, 20; R., 10, 50%; L., 10, 50%  
 R. Med. Lig., 9, 45%; L. Med. Lig., 9, 45%  
 Total R. and L. Med. Lig., 19, 90%  
 R. Lat. Lig., 5, 25%; L. Lat. Lig., 6, 30%  
 Total R. and L. Lat. Lig., 11, 55%  
 R. Ant. Cruc., 5, 25%; L. Ant. Cruc., 5, 25%  
 Total R. and L. Ant. Cruc. Lig., 10, 50%  
 R. Med.; L. Med. and Ant. Cruciate  
 Total 6, 30%  
 Total cases with two (2) or more ligaments involved  
 13, 65%

**Post Operative Cases**

Total Cases, 20; R., 9, 45%; L., 11, 55%  
 R. Med. Lig., 7, 35%; L. Med. Lig., 7, 35%  
 Total R. and L. Med. Lig., 14, 70%  
 R. Lat. Lig., 4, 20%; L. Lat. Lig., 4, 20%  
 Total R. and L. Lat. Lig., 8, 40%  
 R. Ant. Cruc., 5, 25%; L. Ant. Cruc., 9, 45%  
 Total R. and L. Ant. Cruc. Lig., 14, 70%  
 R. Med.; L. Med. and Ant. Cruciate  
 Total 6, 30%  
 Total cases with two (2) or more ligaments involved  
 9, 45%

**Summary and Conclusions:**

At the completion of the progressive resistive exercise program, when bilateral muscular balance was obtained and in which the total strength level of both legs was raised above the starting level, a re-evaluation of the known weakened ligament structures was made by using the previously mentioned testing techniques.

Within the scope of this study, ligament weakness was again demonstrated in all cases in approximately the same status of weakness as compared with pre-exercise tests. Again the degree of movement was not measured but subjected to empirical evaluation as to its comparison with the original test.

It is concluded that the utilization of **progressive resistive exercise has no known effect for the reestablishment of medial or lateral ligament or anterior cruciate ligament** strength as well as no influence on the shortening effect of these ligaments that would be necessary for adding stability to the joint under discussion.

**Observations for Continued Activity:**

The athlete or subject with known weak ligaments is by far more susceptible to reinjury, either by forceful contact or rapid changes of direction without contact, because the continuity of action between the tibia-femur will have an abnormal range of motion that is more difficult to control by muscular action. The development of "specific habit patterns" of action while in motion calling for an active pull of the supporting musculature of the thigh, when the foot comes in contact with the ground, seems to become a necessary pattern of action to stabilize the joint against the excessive rotational forces as well as medial and lateral movements that are present in a knee with such signs of internal weakness. This pattern of action forces the quadriceps and hamstrings to "snug" the tibia-femur joint thus making it act as one unit when a turn or twisting action follows the planting of the foot. This action will decrease the effect of excessive motion of the tibia on the femur. The development of this concept into the action situation takes time and effort to establish but evidence of its success, in specific case examples, point to the worth as a way to returning activity with reduction of injury potential. A more complete discussion of this concept is given in the recent article of the author in the February issue of the National Athletic Trainer Journal.

The utilization of restrictive bracing for such cases is in opposition to opinion in that the bracing effect tends to reduce the effectiveness of normal muscular function and thus reducing its efficiency as well as produces atrophy which can lead to further instability. Protection of an unstable knee by a brace is indicated only after surgery and maximal muscular redevelopment has failed to yield a serviceable knee<sup>9</sup>, this of course is in the extreme situation where excessive activity would be contraindicated and only ordinary ambulation would be expected as the function.

The psychological implications of continued instability of ligament structures following the exercise program caused considerable anxiety on the part of the students who are still interested in taking part in various phases of physical action. We have found it very practical, in discussing the individual problem with the student, to suggest the wearing of a modified support like the simple elastic knee brace. Here we realize that its protective qualities are limited but the pressure created at the joint area works as a constant stimulus or reminder and

Continued on page 15

**RESEARCH:** (Continued)

from all indications the proprioception stimulus created by the elastic brace seems to stimulate a more active muscular tension action of this supporting musculature and the person is more capable of putting forth physical effort in the activity. This we consider is a "crutch" that permits more active function and stimulated protection even though the recognized supportive capacity is minimal in its total protective qualities. This effort along with the emphasis on the development of "specific habit patterns" of action previously discussed appears to be a practical approach to returning the person to activity. Experiences as demonstrated by a number of persons using this approach points to the worthiness as a practical solution to the problem of activity participation where weak ligament structures are still present following the exercise program.

Probably the best approach to the problem solution is the practice of preventive conditioning through specific progressive exercise techniques that will not only strengthen the supporting musculature but in a similar way increase ligament density thus producing a joint area that will more effectively sustain itself against the forces applied.<sup>10,11</sup>

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**MEDICAL AND SURGICAL TERMINOLOGY****Signs and Symbols**

a.c.	before meals
A.D'L.	activities of daily living
A/E; B/E	above or below elbow (amputation)
A/K; B/K	above or below knee (amputation)
A.J.	ankle jerk (reflex)
A.P.	anterior posterior
B.I.D.	two times daily
B.J.	bicep jerk (reflex)

B.M.R.	basal metabolic rate
B.N.A.	(accepted anatomical terminology)
B.P.	blood pressure
C.A.; Ca	chronological age; cancer
C.B.C.	complete blood count
c.c.	chief complaint
c	with
C.; W.	colored or white
C.P.A.	costal phrenic angle
C.V.A.	costal vertebral angle; cerebral vascular accident
C.V.H.D.	cardio vascular heart disease
D.C.; D.O.	discontinue orders
D.O.E.	dyspnea on exertion
Dx	diagnosis
E.E.G.	electroencephalograph (brain)
E.C.G.; E.K.G.	electrocardiograph (heart)
E.M.G.	electromyograph
E.M.R.	emergency
Fh	family history
H.S.	hour of sleep (bed time)
Hx	history
I.P.	interphalangeal joint
I.R.; R.H.L.	infra red; radiant heat light
I.V.	intravenous
K.J.	knee jerk (reflex)
L.M.N.	lower motor neuron (from anterior horn to periphery)
L.P.	lumbar puncture
L.S.	lumbosacral joint
m	heart murmur
M.A.	mental age
M.P.	metacarpophalangeal joint
n	size of sample (research data)
N.P.O.	nothing by mouth
pH	hydrogen ion concentration, a measure of alkalinity and acidity
P.H.	past history
p.c.	after meals
P.N.I.	peripheral nerve injury
Px	physical examination
Q; QD	daily
Q.I.D.	four times daily
R.B.C.	red blood cells
R.O.S.	review of symptoms
R.U.Q.	right upper quadrant
Rx	treatment; prescription
s	without
S.I.	sacroiliac joint
Sig.	dosage
S.O.B.	short of breath
T°	temperature
U.A.	uric acid
U.V.	ultra violet
U.M.N.	upper motor neuron (from brain to anterior horn)
U.R.I.	upper respiratory infection
V.I.P.	very important person
W.B.C.	white blood cells
x	any member of population (research data)
x	mean value (research data)
Z	contraction
o	standard deviation
♂	male
o	female
/	flexion
/	extension

## Dates and Sites of 1959-1960 NATIONAL COLLEGIATE CHAMPIONSHIP EVENTS

<b>Baseball</b>	Omaha, Nebraska	June 10-15
<b>Basketball (College Division)</b>		
Regionals	To be determined	March 4-5
Finals	Evansville, Indiana	March 9-11
<b>Basketball (University Division)</b>		
First-round	To be determined	March 8
East Regional	Charlotte, North Carolina	March 11-12
Mideast Regional	Louisville, Kentucky	March 11-12
Midwest Regional	Kansas State University, Manhattan	March 11-12
West Regional	University of Washington, Seattle	March 11-12
Finals	Cow Palace, San Francisco, California	March 18-19
<b>Boxing</b>	University of Wisconsin Madison	April 7-9
<b>Cross-Country (College)</b>	Wheaton College Wheaton, Illinois	November 14
<b>Cross-Country (University)</b>	Michigan State University East Lansing	November 23
<b>Fencing</b>	University of Illinois Champaign	April 1-2
<b>Golf</b>	Broadmoor Hotel, Colorado Springs, Colorado	June 19-25
<b>Gymnastics</b>	Pennsylvania State University University Park	March 18-19
<b>Ice Hockey</b>	Boston University Boston, Massachusetts	March 17-19
<b>*Skiing</b>	Bridger Bowl, Montana Montana State College, Bozeman	March 25-27
<b>Soccer</b>		
First-round	To be determined	November 23
Finals	University of Connecticut, Storrs	November 26-28
<b>Swimming</b>	Southern Methodist University Dallas, Texas	March 24-26
<b>*Tennis</b>	University of Washington Seattle	June 20-25
<b>*Track and Field</b>	University of California Berkeley	June 17-8
<b>Wrestling</b>	University of Maryland College Park	March 24-26

\* Subject to Executive Committee action.

It was the privilege of the author to review "A Manual of Bandaging, Strapping and Splinting" by Augustus Thorndike, M.D. The book was written primarily to be used in the bandaging courses that are given the second year Medical students at Harvard Medical School. It is a concise, well illustrated manual covering almost all types of bandaging, strapping and splinting. In my opinion, there is little to be gained by most qualified trainers in the section devoted to strapping. As one can see, there is basically no need to go into all steps of strapping in a book such as this. However, it is my opinion that it

offers good review for rarely used bandages and splints. The place where I feel the book would have more value than any other place in the athletic field is using it as a supplementary text in athletic training courses offered by many of our universities and colleges. I believe that there is much included that the inexperienced student could readily comprehend and which would hasten his progress in learning to care for athletic injuries.

The book may be purchased from Lea and Febiger, Washington Square, Philadelphia 6, Pennsylvania. The price is \$2.75 per copy.

# N.A.T.A. 1960 CONVENTION

National Program Chairman Fred Wappel has submitted the following tentative schedule of events for the 1960 N.A.T.A. 11th Annual meeting. This year's convention will be held in the President Hotel at Kansas City, Missouri on June 26, 27, 28 and 29.

*Should have been in Spring '60 issue*

## SUNDAY, JUNE 26

- 4:00 P.M. Registration
- 6:00 P.M. Cocktail Hour and Buffet  
(Cost \$5.00 plus drinks)

## MONDAY, JUNE 27

- 8:00 A.M. Registration
  - 8:45 A.M. Assembly—Welcome by Bob Weingart, Chairman, NATA Board of Directors
  - 9:00 A.M. Shoulder Injuries
    - a. Dislocation
    - b. Separation
      - 1. Acromio-Clavicular
      - 2. Sterno-Clavicular
    - c. Muscle Lesions
    - d. Bursitis
- Phases to be discussed:
- 1. Immediate Examination
  - 2. Method of Examination
  - 3. Diagnostic Procedures
  - 4. Importance of Immediate Evaluation
  - 5. Treatment and Care
  - 6. Rehabilitation Procedure

- 10:30 A.M. Break
- 10:45 A.M. Back and Neck Injuries
  - a. Cervical Spine
  - b. Thoracic and Lumbar Spine
    - 1. Transverse Process Fracture
    - 2. Treatment and Participation
  - c. Low Back Problems
    - 1. Congenital Problems
    - 2. Disc Sundrome
- 12:15 P.M. Lunch
- 1:30 P.M. Upper Back, Shoulder and Arm Problems
  - a. Most Frequent Problems Encountered
    - 1. Symptoms
    - 2. Method of Examination
    - 3. Treatment
    - 4. Recovery Time
    - 5. Suggestions Toward Alleviation of Problems
  - b. Special Problems Encountered in Baseball and Most Effective Treatment
    - 1. Causes and Symptoms

- 2:15 P.M. Massage
  - a. Positions Which Relax Muscles for Effective Massage
- 3:00 P.M. Physiological Importance of Salt and Mineral Balance
  - a. Amounts Necessary Towards Maximum Efficiency
- Phosphated Salts, Are They Important?
  - a. Their Effect on Muscle Activity
- 3:45 P.M. National Meeting

## TUESDAY, JUNE 28

- 9:00 A.M. Ankle Injuries
  - a. Sprains
    - 1. Ligaments Most Frequently Involved
  - b. Ligament Severance
  - c. Fractures
  - d. Pertinent Problems
    - 1. Calcium Deposit in and Around Joint

## Phases to be discussed:

- 1. Immediate Examination
- 2. Method of Examination
- 3. Diagnostic Procedures
- 4. Importance of Immediate Evaluation
- 5. Treatment and Care
- 6. Rehabilitation

- 10:30 A.M. Break
  - 10:45 A.M. Knee Injuries
    - a. Ligament Involvements
      - 1. Febial Collateral
      - 2. Fibular Collateral
      - 3. Ant. and Post Cruciate
    - b. Menicus or Cartilage Involvements
      - 1. Types of Tears and Consequences to Participation
    - c. Bursitis
    - d. Drug Indications in the Treatment of Knee Problems
  - 12:15 P.M. Lunch
  - 1:30 P.M. Weight Lifting and Its Importance to the Athletic Program; with emphasis to muscles most important to maximum efficiency in football and toward prevention of injury.
  - 2:15 P.M. Severe Hematomas
    - a. Thigh
    - b. Arm
  - 3:00 P.M. Muscle Strains or Lesions
  - 3:15 P.M. Testing Injured Muscles
- Special Picnic at Cramer's—co-sponsored by all Convention exhibitors. Time to be announced.

## WEDNESDAY, JUNE 29

- 9:00 A.M. Pre- and Post-Operative Knee Rehabilitation
  - a. Active Exercise
  - b. Progressive Resistive Exercise
  - c. Quad Measurement Procedure
  - d. Program After Near to Complete Recovery
- 9:45 A.M. Pre- and Post-Operative Shoulder Rehabilitation
  - a. Passive Exercise
  - b. Active
  - c. Progressive Resistive Exercise
  - d. Program After Near Recovery
- 10:30 A.M. Break
- 10:45 A.M. Progressive Exercise Routine for Low Back Problems
- 11:30 A.M. Heat Exhaustion
  - a. Causes
  - b. Prevention
  - c. Symptoms
  - d. Treatment
- 12:00 Noon Foot Problems and Care
- 1:00 P.M. Drawing of Prizes Donated by Exhibitors

A partial list of the men scheduled to take part in the various discussions are: Bob Bauman, Dr. Tom Brynes, Dr. Dallas Meyer, Dr. Litton, Dr. W. K. Smith, Emil Mamaliga, Dr. Jay Bender.

Room rates in the Hotel President, Kansas City, Missouri:

One person (Single Bed)	\$ 6.75
One person (Double Bed)	7.75
Two persons (Double Bed)	10.00
Two persons (Twin Beds)	11.00

All rooms have bath, circulating ice water, television, radio and air conditioning at no additional charge.

The Hotel President is located on the corner of 14th and Baltimore and all of its 450 guest rooms have been newly decorated and refurbished.

Food and beverage service is rated as the best.



