

The

MAY 1964

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OF THE
**NATIONAL
ATHLETIC TRAINERS
ASSOCIATION**



15th ANNUAL MEETING

PALO ALTO, CALIFORNIA, JUNE 7, 8, 9, 10, 1964



DINE-A-PAK®

Charles C. Spencer, Jr.
Director of Research
The Cramer Chemical Company

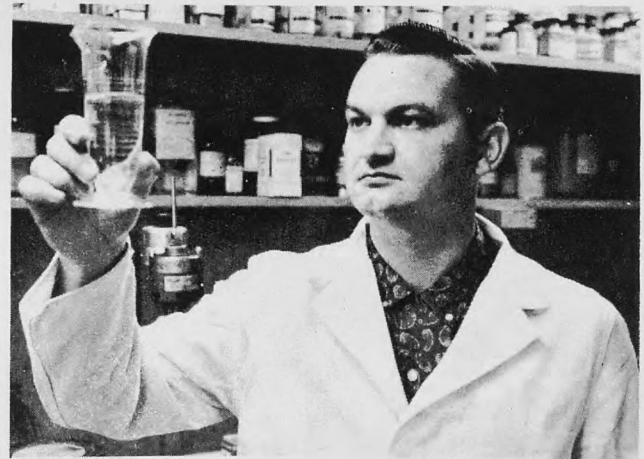
For over two years, Cramers have been concerned with the nutritional requirements and pre-game meals of athletes. Several nutrition experts claim a 200-pound athlete will require more than 4500 calories a day in order to maintain his physical condition during the season. According to the article, "Athletics and Nutrition," in the September, 1959, **American Journal of Surgery**, pages 343-352, an average-sized young male athlete will require about 72 calories per hour for his basal metabolic requirements, and an additional 3.5 to 10.6 calories per minute while in active competition. If the athlete participated in the full 60 minutes of a college football game, the maximum caloric requirement would be 708 calories. For a 48-minute high school game, the maximum would be 580.8 calories.

On game days, the calorie intake is often reduced before the game. This calorie reduction is due to such factors as: low calorie pre-game meals, and the elimination of one meal. Pre-game tension interrupts the normal digestive process, and a solid meal may still remain in the stomach at game time, causing stomach cramps, nausea and occasional vomiting. Some athletes may even be too nervous to eat.

Cramers' goal was to develop a meal to provide as many calories as possible, that could be consumed as close as possible to game time, and one that would eliminate the problems associated with a solid meal. "Dine-A-Pak" is our answer.

The "Dine-A-Pak" athletic meal, provides 650 calories that can be consumed as close as one hour to game time, to provide energy in a convenient, easily digested form.

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Why the cookies? In one of our trial programs involving more than 300 athletes at Baylor University, Baker University, University of New Mexico, Indiana State University, Lawrence, Kansas, High School, and the New Mexico High School All-Star Games, it was determined that the average amount of liquid an athlete could comfortably consume, was approximately 13 ounces. Since this amount limited the calorie intake to a much lower level than what we thought was necessary, a special concentrated cookie was added, in order to increase the calorie intake and still hold the liquid required to 12.5 ounces.

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THE JOURNAL OF THE NATIONAL ATHLETIC TRAINERS ASSOCIATION

The official organ of the National Athletic Trainers Association is published four times yearly. Communications regarding articles should be addressed to:

JACKIE COPELAND, Editor
Junior Service League Orthopedic Center
1219 Dunn Ave.
Daytona Beach, Florida

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Publication offices: 616-620 Columbia Street, Lafayette, Indiana.

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THE EFFECT OF MULTIPLE ANGLE ISOMETRIC EXERCISE ON POST OPERATIVE KNEE CASES: A CLINICAL STUDY

by

William P. Morgan
Assistant Professor
University of Dayton

Certain programs of physical rehabilitation evaluate strength improvement by comparing the pre and post weights lifted throughout the range of motion. Other programs assess the improvement by comparing the initial and final strength at a specific point within the range of motion as measured by the cable tensiometer, a strain gauge, or a dynamometer. The findings of Bender and Kaplan (5) indicate the need for a more sophisticated approach to the evaluation of strength indices of injured muscle groups. Specifically it appears as though physical rehabilitation should involve the factor of strength specificity as well as generality. Once movement is initiated the factor of momentum may be responsible for carrying the weight through the range of motion. By the same token, a static contraction performed with the limb flexed at a ninety degree angle is not necessarily indicative of strength at the one-hundred and thirty-five degree angle. Also, throughout any range of motion, more than one muscle or muscle group will come into action and produce a portion of the movement.

The purpose of this study was to evaluate the effect of multiple angle isometric exercise on knee flexion and extension strength. The five male subjects were members of the University of Dayton Football Team, and each subject was recovering from knee surgery. The study was conducted at the University of Dayton during the second semester of the 1963-64 academic year.

The values to be accrued from strength programs employing isometric techniques have been well established (9), but the factor of strength specificity has apparently been neglected or possibly not emphasized. Following a review of the literature (8) it appears as though many of the advocates of isometric exercise have assumed that the benefits are of a general rather than a specific nature. It has been suggested that isometric contractions at a specific point would produce strength increases throughout the range of motion. Isometric exercise should not be viewed as a panacea for exercise problems.

The Multiple Angle Testing technique was established primarily at the Southern Illinois University Laboratory of Applied Physiology under the direction of Jay A. Bender. Bender and Kaplan (4), in 1962, conducted a hospital study and attempted to determine the effectiveness of isometric testing as a diagnostic aid. On the basis of this study they stated: "In general the isometric testing was useful in finding the areas that were most affected by an injury or illness and in determining the appropriate therapy."

Also in 1962, Bender and Kaplan (1) evaluated the effectiveness of isometric exercises in physical rehabilitation. These researchers state that in many instances where a particular muscle or muscle group was diagnosed as being weak, isometric testing indicated that the antagonistic muscle or muscle group was also weak. Careful consideration of these findings should be given by the therapist

concerned with the rehabilitation of athletic injuries.

Bender (3) also reported in 1962, that some subjects do not gain strength following the employment of isometric exercise. This researcher further states, that when questioned it is usually found that these subjects do not believe isometric contraction exercises are beneficial. This finding suggests that the therapist not only detect weaknesses and prescribe exercise, but also discretely attempt to determine existing attitudes toward the prescribed therapy.

Gardner (7), in 1963, experimented with specificity of strength changes of the exercised and nonexercised limb following isometric training. Sixty subjects were equated on the basis of knee extension strength and assigned to one of four groups. Group I served as a control group. Group II exercised the preferred limb only at one-hundred and fifteen degrees of knee extension, Group III only at one-hundred and thirty-five degrees, and Group IV only at one-hundred and fifty-five degrees of knee extension. Groups II, III, and IV exercised three times per week, employing a six-second isometric contraction held against two-thirds of their maximum tension loads, for a period of six weeks. Gardner concluded: "strength increases are quite specific according to the position at which a limb is exercised, and that cross transfer of either a specific or nonspecific variety should not be expected following isometric exercise." Gardner's findings seem to substantiate the need for multiple angle testing in physical rehabilitation.

Also, in 1963, Bender and Kaplan (5) attempted to determine the validity of the Multiple Angle Testing Method by comparing it with a known guided weight method. The correlations between the methods ranged from .97 to .99. These correlations certainly substantiate the validity of their technique. On the basis of this study the writers concluded that the Multiple Angle Testing Technique can accurately determine a point of weakness in a range of motion and isolate a muscle for therapy.

More recently, in 1964, Bender and his associates (2) conducted an experimental study at West Point. The general plan of the study involved an evaluation of a controlled program of isometric exercises concerned with the prevention of injury through the strengthening of muscles. The subjects for the study consisted of the entire Plebe class entering the Academy in July 1963. The study consisted of evaluating strength of knee extension at two points within the range of motion with the Multiple Angle Testing Method discussed previously. The subjects for study consisted of 300 cadets that either scored low on the test or indicated that they had sustained previous injuries to the lower limbs. The subjects were then equated into two groups of 150 each on the basis of strength scores and past injury. The experimental group performed isometric exercise on the knee extensors and flexors for six months. The control group followed the regular procedure prescribed by the Academy. On the basis of this investigation the writers concluded:

1. Re-injury appears to be more serious in most cases than new injury, and the incidence or recurrence is higher in those individuals with only partially corrected injuries.
2. If isometric exercises are used in prophylaxis or in therapy, there should be a specific method of evaluating the effectiveness of the program.
3. Individuals lacking in strength seem to be more prone to knee injury than those who have adequate strength in proportion to their body weight.
4. The results of this study point up clearly that knee

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THE EFFECT OF MULTIPLE ANGLE (continued)

injuries in persons actively participating in sports can be reduced greatly by instituting a careful testing and strengthening program to ensure that adequate strength is developed and maintained.

5. When an individual has suffered an injury to the lower extremity, even though it may appear quite moderate, the muscular area involved should be thoroughly evaluated to determine the degree of impairment and the progress of recovery; this allows a logical assessment of the time at which the individual may be permitted to return to active participation in sports.

On the basis of this review of literature, it appears that the Multiple Angle Testing Technique should be employed in evaluating strength indices following injury or surgery. Needless to say, this same technique should be employed as the basis for prescription of corrective exercise. The present study is concerned with the application of the Multiple Angle Testing Technique to a specific athletic situation.

During the Spring of 1963 all members of the University of Dayton Football Team were examined by this writer (10) to detect muscular weaknesses. Those players with existing weaknesses were placed on corrective programs. Those players that required knee surgery following the 1962 season received surgery during the Winter or Spring of 1963. The current study dealt with those players that

received knee surgery. The players were referred to the writer on February 1, 1964, at which time their recuperation was evaluated and they were programmed on multiple angle isometric exercise as dictated by individual needs.

The five cases referred to the writer for evaluation were classified as "recovery-inadequate" on the basis of the Multiple Angle Testing Technique. In four of the cases the recovery was totally negative and in the remaining case recovery was considered to be "negative-positive." A classification of "negative-positive," as employed in this study, indicates a combination of both under and over development at specific points throughout the range of motion.

Testing Technique

Each subject reported to the testing room at a specified time on a specific day. The room temperature was maintained at 72 degrees F. for all tests. Left and right knee extension and flexion strength was evaluated with the knee flexed and/or extended at the 180, 135, and 90 degree angles. Strength was measured with the cable tensiometer. See Clarke (6). The strength of the injured knee was compared to the uninjured knee. A strength differential of ten per cent (10%) at a specific point in the range of motion was considered inadequate recovery.

Prescription

Isometric exercise was prescribed for the angle (s) of weakness. Prescription of exercise for the antagonist was based on initial agonist-antagonist strength ratios and range of motion. The antagonist was exercised when the need existed.

Exercise Program

Each subject performed three maximum isometric exercise bouts for six seconds each, on a daily basis, for a five week period at the prescribed angle (s) of work.

Follow Up

Recovery at the end of the five week period was evaluated and all subjects were classified as fit, restricted, or unfit for spring practice on this basis. An individual classified as "fit" was ready for spring practice. A restricted classification indicated that the player's recovery was not adequate, but he was ready for spring drills on a partial basis. Players on restricted status continued their therapy throughout spring practice, and their degree of participation was governed by their unique situation. Players classified as unfit continued their therapy but did not take part in spring drills.

Table 1 illustrates the pre-test strength scores. The scores represent the per cent of strength when the injured knee was compared to the unaffected knee. The basis for the calculation of this percentage was the number of pounds pulled as measured by the cable tensiometer.

Table 2 illustrates the post-test strength scores. Here again, the scores represent the percentage of strength when the injured knee was compared to the unaffected knee. As pointed out previously, the post-test took place following five weeks of multiple angle isometric exercise.

In reviewing Table 1 it is obvious that an evaluation of strength on a total basis is not necessarily indicative of strength at specific points in the range of motion. For example, three of the subjects posted mean scores of 96% or better on knee extension which would be above the diagnostic basis for prescribing corrective exercise and

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THE EFFECT OF MULTIPLE ANGLE (continued)

yet all subjects had weaknesses at specific points. Furthermore, four of the five subjects scored 95% or better at the 180 degree test of extension, and yet a review of the 90 and 135 degree tests for extension shows categorically that six of the ten tests were below normal. This clearly indicates a need for evaluating injuries and therapy with a multiple angle testing technique.

TABLE I
Pre Test Isometric Strength Scores
by Per Cent of Normal¹

CASE	TIME ²	KNEE EXTENSION			Mean
		90 degrees	135 degrees	180 degrees	
CASE	TIME ²	KNEE FLEXION			Mean
		90 degrees	135 degrees	180 degrees	
I	10 Months	92%	82%	122%	98%
II	10 Months	70%	51%	88%	69%
III	3 Months	30%	92%	100%	74%
IV	10 Months	81%	113%	95%	96%
V	13 Months	82%	123%	96%	100%
I	10 Months	101%	71%	90%	87%
II	10 Months	88%	77%	106%	90%
III	3 Months	50%	72%	73%	65%
IV	10 Months	66%	80%	100%	82%
V	13 Months	117%	83%	113%	104%

¹Per cent of normal strength was based on a comparison of the injured knee to the unaffected knee.

²Refers to the time elapsed from the date of the operation to the beginning of the current isometric study.

TABLE II
Post Test Isometric Strength Scores
by Per Cent of Normal¹

I	5 Weeks	103%	100%	108%	104%
II	5 Weeks	90%	86%	109%	95%
III	5 Weeks	69%	96%	93%	86%
IV	5 Weeks	104%	99%	102%	102%
V	5 Weeks	93%	123%	97%	104%
I	5 Weeks	118%	113%	103%	111%
II	5 Weeks	100%	87%	116%	101%
III	5 Weeks	63%	98%	96%	86%
IV	5 Weeks	95%	92%	104%	97%
V	5 Weeks	119%	95%	115%	110%

¹Per cent of normal strength was based on a comparison of the injured knee to the unaffected knee.

²Refers to the number of weeks the subjects performed isometric exercise between the pre and post tests.

A review of Table 2 indicates that the five week isometric exercise program produced strength gains in excess of that expected by chance. Also it is noted, that although the increases for the exercised angles, ranged from 10% to 42%, certain cases remained at the diagnostic level for continued therapy.

On the basis of the post-test strength data the following decisions were made regarding fitness for spring practice:

1. Case I was classified as "fit" for practice.
2. Case II was classified as "restricted" because of the continued weakness at the 135 degree angle of flexion and extension. It is observed that a considerable increase in strength occurred, but the increase still left the injured knee below the established 90% diagnostic level. Case II entered spring practice on a "restricted" basis pending improvement as determined by the team physician.
3. Case III was classified as "unfit" for spring practice. It should be pointed out that Case III illustrated a post operative-therapy time span of three months

as compared to a post operative-therapy time span of at least ten months for all other cases. This subject evidenced satisfactory strength recovery at all angles except the 90 degree angle of flexion and extension where the improvement amounted to 39% and 13% respectively. The improvement of Case III at the 90 degree angle of flexion and extension advanced the strength index to 69% and 63% respectively which still remained well below the established 90% diagnostic level. On the basis of this finding, and the newness of the operation, it was felt that this subject should not participate in spring practice.

4. Case IV was classified as "fit" for spring practice.
5. Case V was classified as "fit" for spring practice. It is interesting to note that this subject had pre-test scores of 83% and 123% respectively for flexion and extension at the 135 degree angle. This differential of 40% was attributed to the type of therapy that was prescribed following the operation. Specifically the subject had been given knee extension exercise with a boot. This subject did not receive exercise for the knee flexors and consequently overdevelopment of the knee extensors resulted. During an interview this subject stated that he eventually progressed to the point where he was extending a ninety pound weight with the injured knee. This finding indicates the necessity of periodic observation on the exercised appendage as well as the contralateral limb in order to draw comparisons. The value of periodic examination of the agonists and antagonists is of equal importance in the therapeutic process.

The following conclusions seem warranted on the basis of the observations made in this clinical study:

1. In terms of range of motion, strength appears to be a specific factor rather than a general factor.
2. The Multiple Angle Testing Technique permits evaluation of weaknesses at specific points in the range of motion which in turn enables the therapist to isolate affected areas for therapy.
3. The 180 degree angle of flexion and/or extension seems to be the least affected angle in the post operative examination.
4. It appears that a Multiple Angle Technique should be employed if a valid assessment of strength is to result.
5. The therapist employing manual or static-mechanical devices should probably be more concerned with the 90 and 135 degree angles than with the 180 degree angle.

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REPORT OF THE 1964 NCAA FOOTBALL RULES COMMITTEE MEETING—JAN. 11, 12, 13, 1964

by Thomas E. Healion
Chairman of the Board, NATA

SUBJECT: New 1964 Football Rules pertaining to
equipment and injury.

A. Rules governing the hand, wrist, forearm, and elbow:

Rule 1, Section 4, Article 4, b.—Sole leather or other hard or unyielding substance on the hand, wrist, forearm or elbow of any player, no matter how covered or padded.

Rule 1, Section 4, Article 4, c.—Tape or any bandage on a hand, wrist, forearm, or elbow unless used to protect an injury and specifically sanctioned by the umpire (the underlined words were added to the rule this year).

THE ABOVE 2 STATEMENTS ARE CONSIDERED ILLEGAL EQUIPMENT.

The words "The rules committee has approved and permits the wearing of uncovered, non abrasive pads of non absorbent closed cell, slow recovery foam on hands and arms," have been deleted from the rules interpretations.

Explanation of the Rule:

1. Gauze and tape may be used on the hand, wrist, forearm, or elbow *only* to protect an injury, not to prevent an injury.
2. A manufactured pad may be used to prevent an injury to the hand, write, forearm, or elbow, providing it is not sole leather or other hard or unyielding substance. This means that the following pads may be used to prevent an injury:

Hands: MacGregor—HFG Glove or their new uncovered glove.

Rawlings—FAP hand and forearm pad, or a covered pad.

Wilson—F9960 glove

Forearm: MacGregor—HAP or a similar type.

Elbow: The regular basketball type knee pad.

(The use of a manufacturer's name above is just for example only. Any manufactured pad that meets the rule may be worn).

Notes:

1. The athletic trainer is on his honor when he states that he has an injury that must be protected with gauze and tape.
2. We must see to it that the covered type of preventive pad be kept clean and soft.
- B. New Section to Rule 9 reads: "No player shall deliberately or maliciously use a helmet or head to butt or ram an opponent's head, neck or face."
- C. Some of the stated reasons for the new substitution rule are:
 1. To help prevent fatigue.
 2. To help prevent injuries resulting from fatigue.
 3. Ability to replace immediately an injured man.
- D. The feigning of an injury must be discouraged at all times. This is part of the Football Code.

Rule 1 Section 4, Article 4

- a. No one wearing illegal equipment shall be permitted to play. Any question as to the legality of a player's equipment shall be decided by the umpire. Illegal equipment includes:
- b. Sole leather or other hard or unyielding substance on the hand, wrist, forearm or elbow of any player, no matter how covered or padded.
- f. Tape or any bandage on a hand, wrist, forearm, or elbow unless used to protect an injury and specifically sanctioned by the umpire.

Explanation of the 1964 rule:

1. Gauze and tape may be used on the hand, wrist, forearm, or elbow *ONLY* to *protect an injury*. not to prevent an injury.
 - a. This also includes the taping of a thumb or finger.
 - b. This part of the rule was an attempt by the rules committee to eliminate having a football player come on the field with his hands and arms all taped up to prevent his hands and arms from injury (the prevention factor will be covered in a latter explanation).
 - c. We, as trainers, are on our honor when we declare an injury to this area.
2. A manufactured pad may be used on the hand, wrist, forearm, or elbow to *prevent an injury* providing it is not sole leather or other hard or unyielding substance.
 - a. This means that the covered pads, or uncovered pads may be worn.
 - b. Unlike last year, the covered hand pads such as the MacGregor and Wilson (GRID) pads may be worn.
 - c. The covered elbow pad may now also be used.
 - d. It was suggested by the rules committee that these pads be kept clean and soft (washing them for each game would be desirable).
 - e. It is also suggested by the committee that the size of these pads do not get out of hand.

THE EFFECT OF MULTIPLE ANGLE (continued)

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SHIN SPLINTS

By James Littlejohn

The subject of "Shin Splints" has been discussed by coaches, trainers, athletes and the best of medical men for lo these many years. Causes and treatment have elicited discussions among those concerned that would rival some political discussions in the heat generated. Running on hard surfaces, running in cold weather without proper covering, etc., have been ideas advanced as contributing factors.

Although there are many theories advanced as to what happens, no one will say definitely what does happen. On page 38 in *Safety in Athletics*—Lloyd, Deaver, Eastwood, we find "shin splints—inflammatory condition of muscles known to physicians as myositis.

On page 126 of *Athletic Injuries, Prevention, Diagnosis and Treatment*, Thorndyke, 3rd Edition:

"Shin Splint—simple myositis. Located at the site of Tibialis posticus origin on the posterior and mesial surface of the lower or middle third of the tibia."

Also on pages 210-211 of the same edition, Thorndyke states "Care should be taken to distinguish between shin splints and stress fracture of the tibia or fibula."

Also on page 210 he states "very definite injury—a tearing of the origin of the tibialis posticus muscle from the tibia in its lower third."

S. E. Bilik, M.D., states in his "Trainer's Bible," 9th revised edition, pages 261-262:

"disabling ache along the shinbone—usually along the lateral aspect, occasionally medially—the exact nature of the pathology still puzzles those who specialize in athletic disabilities."

"the discomfort centers deep in the belly of the muscle, most frequently affecting the Tibialis anticus."

"the theory that 'shin splints' is due to an actual avulsion of some of the tendon fibres from their origin is not tenable."

Whatever the cause, running on hard surfaces, etc., whatever the nature of the pathology, it is a crippling condition as trainers, coaches and athletes know.

The accompanying diagrams with their brief explanations show the method that I discovered some years ago when I suffered a bad case of shin splints myself. After many experiments, I hit upon this one. I experienced immediate relief as soon as I applied it. The boys on our squads here at St. Lawrence University through the years have almost universally declared they received immediate relief.

One case this fall, a football player, had this method used in conjunction with the shin tape job completely encircling the leg that has been used so many years. After the third day, we did away with the shin tape and used this method only until injury had recovered.

Extension of the foot brings on pain. By using this method, we prevent full extension, thereby hastening healing.

We do not have track here, but I have used this method in football, basketball, baseball, skiing and ice hockey. I see no reason why, since it is effective in these sports, it should not be of use on track teams.

Should any of you use this method, I would appreciate hearing about the results you received.

THE LITTLEJOHN METHOD OF TAPING FOR SHIN SPLINTS



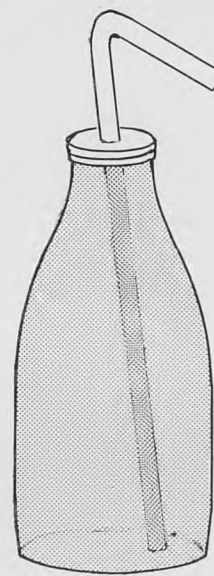
Fig. 1
Figure 1 shows the two anchors—one on the foot the other on the leg, with strip of tape (red line) reaching from anchor on foot to anchor on leg.



Fig. 2
Figure 2 shows the instep strip pressed against the leg by horizontal strips.

Be sure that the foot is held at right angle to leg as in regular taping position.

Strip from foot to leg should be firmly anchored before foot and leg strips are applied to draw strip against instep.



1 qt. Squeeze Bottle Polyethylene

Here is an idea for drinking water for teams. We use a portable bubbler for football and baseball but for ice hockey where the old family drinking jug is an ideal way of spreading cold germs and the paper cup litters up the place, we are now using a quart size polyethylene squeeze bottle with a bent tube as shown in the accompanying sketch.

By using this method we instruct the boys to squirt the water into their mouths. The tube does not come into contact with the lips.

Bottles can be obtained from the manufacturers of laboratory supplies and are called "wash bottles."

End of tube is quite small so I snip off the tapered end with a scissors before using.

Another result is that the athletes do not drink as much water.

FOR FOOTBALL COACHES AND TRAINERS

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UNUSUAL ATHLETIC INJURIES

Lloyd Stein
University of Minnesota

Fractures

1. Patella—on a pitcher's leg, during a pitch—required surgery.
Patella—a miler running during practice.
2. Thumb—taped as a usual sprained thumb before x-ray.
3. Coracoid—process—Fracture of the neck with no apparent history of a blow.

Dislocations

1. Thumb—compound fracture—caught in a face guard during football drill.
2. Finger—compound dislocation index finger. Hit with a baseball.
3. Fibula—dislocation of head of fibula with peroneal nerve involvement and foot drop.
Fibula—head dislocated due to a blow.
4. Patella—dislocated by direct blow.
5. Knee—complete anterior lateral dislocation caused by being hit by three players at the same time.
Extensive tissue destruction and required surgery.
6. Vertebrae—dislocation of 7th cervical with fracture of the transverse process. Player walked off the field with an apparent strained neck.

Hip dislocations

1. 2 on 1 drill in football.
2. Players head between opponents legs during a pile up and tackle.

3. Player running at full speed and stopped suddenly.
4. Player turned suddenly and changed directions to cover a pass receiver.
5. High and low blocking simultaneously.
6. A full back in a defensive stance with legs apart and hit or blocked hard.

Foot

Dislocation of talus on tibia with chip fracture of talus and fibula. Wrestler on his feet and forced backward suddenly.

Shoulder

Acromio—clavicular dislocation complete by forceful landing on shoulder during wrestling match.

Internal injuries

Ruptured spleen—caused by a blow to the left side as athlete had both hands in the air reaching for a pass.

Ruptured spleen—checked hard into the boards during a hockey game.

Ruptured spleen—hit hard on left side during a blocking drill. Complained of pain in the left shoulder after the accident.

Ruptured kidney—came in to block a punt with arms overhead and received a blow to the abdominal area. Surgery required.

Brain—hockey player somersaulted through the air and fell on a skate into the temple. Required surgery—had paralysis and speech problems.

Intestine—rupture of intestine 6" from stomach, caused by a blow to abdominal area. Patient was in a comfortable position only while his knees flexed on chest.

Continued on page 12

N.A.T.A.

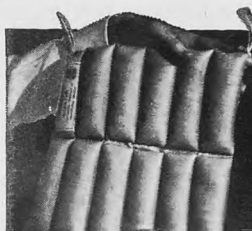
15th ANNUAL MEETING

PALO ALTO, CALIFORNIA,

JUNE

7, 8, 9, 10,

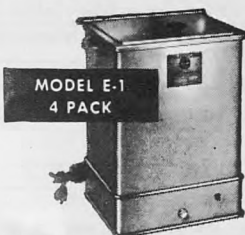
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THE RENAISSANCE OF PHYSICAL FITNESS

By S. E. Bilik, M.D., FABPM & R.
133 Valley Road
New Rochelle, N. Y.

I quote from an article I wrote in 1944, "What the Health" . . . " . . . a squad of German prisoners marching past our hospital. Short and tall, they are rugged, muscular, radiating strength, vigor, confidence . . . represent a physical ideal toward which we, as conditioners of man power, strive, namely the attainment of profound health and vigor . . . Repeatedly the writers expressed amazement at the physical power, ruggedness and courage of our recent foe . . . With the rise of frenzied nationalism, this plan of cultivating physical supermen, became an absolute religious dogma . . . Physical education is not a matter which concerns the individual . . . it is an essential requirement for the self-sustenance of the nation . . ."

" . . . During the intermissions between wars, the democracies, including ourselves, wallowed in dreams of peace on earth and good will to all men, pursuit of happiness through self indulgence, freedom from all possible sweat and toil . . . When the deluge came, devitalized France toppled like a broken reed. Of Britain, Shirer wrote:—"What impressed me most was their physique. They were hollow chested and skinny and round shouldered, typical of the youth England so criminally neglected . . ." As for America, the outbreak of the war (World War II), found our potential combat man power in deplorable physical condition . . . "As Sect. of War, I have come into the possession of facts about the health of our youth, so grim, so startling, that our people should receive them with the consternation they would display upon reading of a military disaster . . ." Col. L. G. Rountree indicts:—" . . . the indifference and the apathy (to physical fitness)

on the part of the government, states, municipalities, parents, teachers, churches, physicians . . . the failure is a combined one . . . youth is the victim . . ."

" . . . "Under stress of war needs, Granitville, S. C. schools promoted an intensive program of physical training for every child medically fit to participate. Twenty-nine thousand colleges and high schools in every city and hamlet were carrying on equally intensive programs . . . Physical educators emphasized:—"Muscular endurance, agility and coordination are essential for fighting men . . . Health and fitness are a vital necessity for war." . . . And by "health" they meant strength and vigor and not mere freedom from disease.

UNDER WHAT CIRCUMSTANCES ARE HEALTH AND FITNESS ANY LESS OF A VITAL NECESSITY? Herein lies the crux of the present (mind this was written in 1944) national hullabaloo about PHYSICAL FITNESS. If we assume that a strong, muscular body, endurance, agility, health and overall fitness are desirable only in time of war, then all our admitted apathy is justifiable . . . The very opposite is true, every intelligent human being appreciates that health and fitness are invaluable adjuncts to enjoyment of life. We want our children to be robust and vigorous and active . . ."

1962 nearing . . . Life is aeons of years old; Genus Homo Sapiens a few million: "civilization" a few thousand; modern science no more than a hundred or so . . . Within one man's lifetime (mine, for one) our mode of living has passed from "in the sweat of your brow" to mechanization, automation, "push button era," leading to revolutionary changes, definitely advantageous overall, but also conducive to rapid deterioration of the bodily physique and vitality . . . "The cultivation of the mind alone is destructive of the body" has come true with a vengeance.

Is all the present hullabaloo about our PHYSICAL UNFITNESS just so much hogwash? "The cited compari-

Continued on page 14

UNUSUAL ATHLETIC INJURIES

(continued)

Wounds

1. 24 stitches in wound due to collision during signal drill and collision after mixed signals. No helmets were worn.
2. Puncture wound by steel stake on old style yard markers. Stake penetrated athlete's lower leg.
3. Puncture wound—bailing wire pierced athlete's hand during tackling practice. Wire was from a bale of hay used for covering the field.
4. Scalp wound requiring stitches. When a catcher threw his mask in the air to catch a pop fly—mask came down on his bare head causing scalp wound.
5. Laceration—athlete slid into end zone after catching a pass and slid across a broken pop bottle. Six inch laceration through quadriceps just above the patella.

Breathing restrictions

1. Blow to front of neck in football. Patient became unconscious and imminent medical attention needed.
2. Bruise to larynx, spasm and edema to larynx with hemorrhaging. Immediate hospitalization needed.
3. Hyperventilation syndrome from breathing too much pure oxygen. Fright and anxiety accompanies this accident. Patient became normal after breathing into a paper bag.

Pectoralis major rupture—athlete threw a baseball while off balance causing a complete tear of the pectoralis major muscle requiring surgery.

Achilles tendon rupture—due to a sudden stop from full speed in football.

Achilles tendon rupture—on a track man running half speed in a 220 workout.

Achilles tendon rupture—a middle-aged athlete doing back hand springs in tumbling.

Deltoid paralysis—caused by a blow in football to the deltoid and circumflex nerve. After 7 months still unable to abduct arm.

Eye injury—football player wearing double face bar received direct blow on the eyeball causing hemorrhage. Later secondary hemorrhage (pyphema) caused partial loss of vision.

Leg infection—football player had a cast over a fractured leg. After some time leg began to itch so he straightened out a wire coat hanger and shoved it down in between the cast and let to scratch his so-called itch and developed an osteomyelitis.



KEEP YOUR TEAM AHEAD

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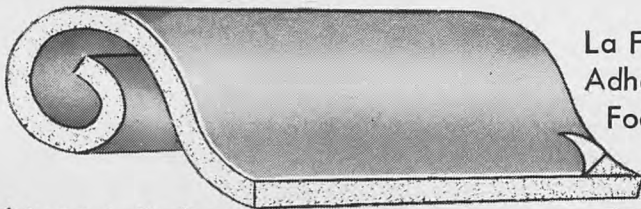
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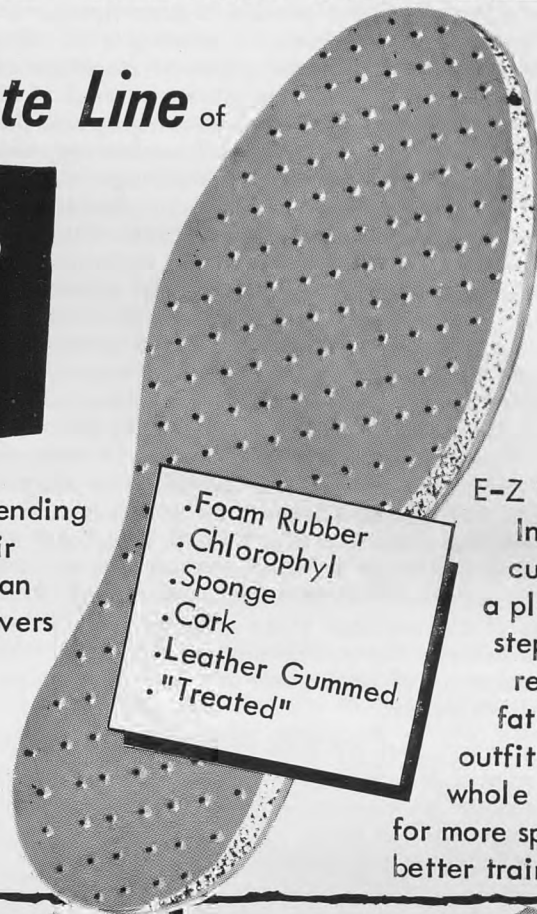
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More and more coaches and trainers are depending on the E-Z Walk line of Foot Reliefs for their athletes. Wherever footwork counts---you can count on E-Z Walk---Specialists in Foot Savers for nearly 40 years.

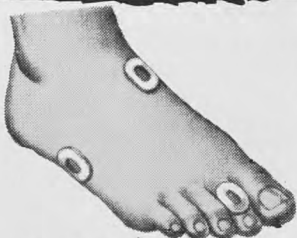


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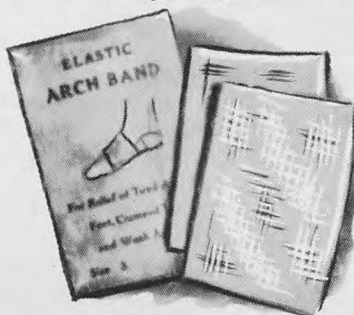
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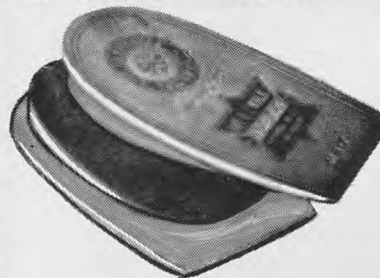
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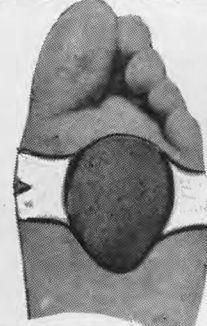
E-Z Walk Tongue Pads



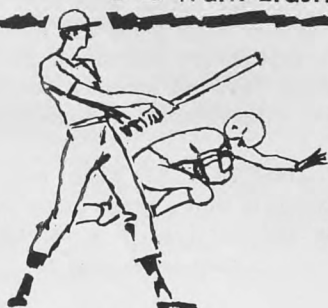
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THE RENAISSANCE OF

(continued)

sons are shocking . . . They provoke serious thought and stimulate organized action before it is too late . . . They reveal that the rapidly changing mode of American life is leaving its imprint on the basic physical fitness of our youth . . ." Those who take time to investigate, are profoundly SHOCKED . . . During his presidency, Gen. Eisenhower repeatedly expressed his concern with the revelations of our physical deterioration . . . Somehow he found time to launch the Council of Youth Fitness to combat this vicious trend. Overwhelmed with numerous acute problems of steering America through a communist infested world, Eisenhower could not possibly give more support to this incipient effort to promote a RENAISSANCE OF FITNESS . . . All of Shane McCarty's sincere and dedicated work failed to dent the prevailing national apathy and the movement was fast getting nowhere when President Kennedy revitalized the drive with intensity and perseverance . . . He wrote, he spoke, he assigned Abe Ribicoff and Don Wilkinson to the exacting task . . . It is evident that John Kennedy means to prompt and prod all concerned until the movement takes fire . . . To those of us who have a thorough appreciation of the seriousness of the problem, there is hope that all these efforts will achieve the objective of reversing the trend from deterioration to restoration and retention of true PHYSICAL FITNESS.

Firstly, is it true that WE ARE PHYSICALLY UNFIT? Many intelligent and sincere individuals argue that our admitted athletic prowess and prominence contradict the claim that our youth is unfit . . ." The physical fitness of a nation definitely is not displayed in the showing of its Olympic teams . . ." Furthermore our nation of 180,000,000 would have made a relatively poor showing in the 1960 Rome Olympics, except for the winning points piled up by our Negro athletes . . . There are 165,000,000 whites and 16,000,000 Negroes in the U. S. . . .

The oft heard contention:—"Look at the vast proportion of our youth who fail to qualify for military service" is admittedly challengeable, since the very rigid and exacting qualification standards encompass many other factors besides that of physical fitness. Many star athletes are turned down for military service for relatively minor disabilities, only to return to participation in most strenuous competitive sports.

. . . The lay and professional literature teams with reports of comparative tests showing that our children are in poorer physical condition than those of Italy, Germany, England, Japan, Russia, China . . . Many physical educators and physicians challenge the reliability of these tests and the conclusions based on the latter. Little is to be gained by debating the relative value of these tests. "Are our children physically unfit?" can be answered vividly by this simple procedure:—

Put a few score athletic youngsters and an equal number of non-athletic in shorts. Parade the two groups before an audience of parents, teachers, physicians, government officials. Vividly the difference in the physical condition of the active and the relatively inactive child will be driven home. Can you think of any logical reason why this shocking difference should be permitted to continue? The trained youngster rugged, muscular, vigorous, dynamic, exuberantly healthy and vital, while your own youngster looks like a bedraggled misfit. The slightest sneeze and snuffle is hastily rushed to a "specialist" to

protect the adored child against outright disease. Little, if anything, is done to assure the growing child of a stanch, active, vital body. Frequently efforts of our educators to introduce an intensified program of fitness for all children, are looked upon as a nuisance and combatted by parents who thus far do not appear to give a hoot as to what physical condition their children are in . . . as long as they do not sneeze or snuffle.

PHYSICAL FITNESS must first be "sold" to the parents and particularly to the mothers. The fathers will readily agree that there is a real need of intensifying promotion of universal physical fitness but will do exactly nothing about it . . . "too busy" . . . The mothers, thus far, appear to be concentrating on staying fit and streamlined themselves with little thought for their growing children. What we need is evangelists of fitness and health to induce the mothers to clamor for intensified programs of physical development of their children . . . The PHYSICAL EDUCATOR is the logical evangelist to spread this gospel of fitness. He must seek every opportunity to address groups of parents at churches, clubs, PTA meetings, impassionately and convincingly preaching vigorous health . . . Every Physical Educator must aim to become a Bernarr MacFadden, who though a favorite butt of ridicule of our press, nevertheless was the man who did more than anyone else in the world, to induce millions of people to accept physical fitness as an indispensable facet of healthful daily living.

Interest in physical fitness and the love of a stanch, good looking body, can be aroused by sincere and enthusiastic promotion. If compulsion is necessary to achieve the objective, then compulsion it must be. Youth is immature, lacks judgment, foresight, experience, insight; it must be guided with a firm and experienced hand in the paths that are best for it, in the present instance to the desired standards of physical fitness.

After 50 years of intensive activity in physical education and medicine, I do not see how any logical individual can possibly challenge the truth that humanity is deteriorating physically . . . The next question is "SHALL WE DO ANYTHING ABOUT IT?" Evolution has ruled the progress of the world . . . Evolution appears to be changing Genus Homo Sapiens from a variety of muscular ape into a skeleton draped with bacon, housing ever increasing masses of fallout resistant brain tissue that is certain to carry humanity to ever greater heights of intellectual and scientific achievement . . . "Muscle, what for?" is a frequently heard challenge by those who have none, never had any, and wouldn't know what to do with it if they did have it, brilliant members of our genus who have never exercised more than their tongues or vocal cords.

. . . There are some who object to "muscle and sweat;" object to muscle because they are allergic to sweat. The "don't raise a finger after forty" advocates, probably did not have enough vitality to raise that finger before forty. Activities that produce a good musculature, coincidentally strengthen all the vital organs, improving the functioning of the heart, the lungs, the liver, the digestion, the posture, the mind, keenness of mental reaction comes with vigorous physical fitness. A well trained body gives the individual confidence, courage a bright cheery outlook on life. Debilitated youngsters or adults have no stomach for a fight, however necessary and unavoidable, a weakling cringes and runs.

IS PHYSICAL FITNESS DESIRABLE? Each must answer this for himself. Certain it is that a great many of us are profound believers in the survival of a strong,

Continued on page 15

THE RENAISSANCE OF

(continued)

vital, vigorous, rugged body. Let us dedicate ourselves to becoming crusaders in the struggle to achieve a PHYSICAL RENAISSANCE. The present drive may well achieve the desired goal.

The primary objective of intensive athletic training is "to put the body with extreme and exceptional care under the influence of all the agents which promote its health and strength, in order to enable it to meet extreme and exceptional demands upon it . . . Training aims to condition the muscles, the heart, the lungs, the joints, the nervous system, the mind, the whole body, every tissue and every cell, to function at maximum possible efficiency and to stand up under the most gruelling stress and strain . . ." Trainers and physicians specializing in the care of athletes will assure you that youth willingly or condescendingly, adhering to a program of rigorous training, does achieve super condition and stays thus as long as it abides by these so-called "Spartan" regimens of living.

Proverbially "what is good for the goose should be good for the gander;" if a planned program of training can assure super health, vigor, vitality, endurance, resistance to disease, ability to take stress and strain in stride, confidence, courage and enjoyment of life, then *why limit it to our athletic youth?* Why not apply it to every Tom, Dick and Mary? Admittedly vigorous health is an objective well worthy the essential application of time and effort.

Let us now assume that all of us are profoundly convinced that the proposed drive for a RENAISSANCE OF PHYSICAL FITNESS is our objective. Logically, our next problem is to decide on the *modus operandi*.

Through the passing decades many leaders in physical education have emphasized the acquirement of skills and participation in competitive sports, condemning "artificial" calisthenics as boring; everyone was to be taught some "carry over" sport. In planning an effective approach to universal fitness, it is essential to accept as axiomatic that no more than 20% of our children (or adults) possess the essential neuro-muscular coordinations needed to develop sufficient athletic skills to participate in competitive sports. No efforts, however knowing and conscientious, can possibly make an athlete out of a non-athletic youth. Please do not cite isolated exceptions; they are readily granted. If you believe this sweeping statement is erroneous, try disproving it.

Our competitive sports are invaluable in the development of our athletically endowed youngsters who may well be accepted as our Imperial Guard, our gladiators ever in the forefront of our defense against those who would harm or destroy us. However, it is utter folly to attempt to force games of specialized skills on those who simply "ain't got what it takes" . . . A child or an adult is not very apt to participate in activities he is not very good at . . . Forced to play, he will clown, make half-hearted efforts or manage to duck out of his turn, refusing to fumble clumsily or to strike out ignominiously . . . And he is right. There is no sound reason why he should be forced to eat spinach if he "hates" spinach. By all means use the fascinating and appetizing competitive sports for those physically and physiologically qualified but do not try to jam them down the throats of the naturally clumsy youngsters. Ridicule or disparagement of inherent clumsiness is infantile. We must start with the acceptance of these "facts of life." Idealistically we may condemn "artificial" forms of exercise but from a practical

standpoint, we must utilize them to achieve our primary objective. We are living in a world of artificialities.

Once we accept as axiomatic that most of our children cannot participate in our competitive sports and that true fitness can only be achieved by means of gruelling, intensive and persevering physical effort, it becomes evident that we must provide adequate and appropriate means of achieving universal PHYSICAL FITNESS. Calisthenics, weight lifting, climbing obstacles, running, bicycling, skating, rope jumping, modified wrestling, etc., are admittedly not as appetizing as athletics, but they definitely assure achievement of the objective.

Granting that enjoyment of activities and the acquirement of spiritual, ethical and social gains are most desirable, it is equally clear that we would be well advised to leave all these factors to the parents, the church, the overall school environment. Our own teaching of moral standards must be incidental and must not unduly encroach on our primary responsibility of assuring the children true PHYSICAL FITNESS. "Give to the body what belongs to the body and give to the soul what belongs to the soul." Let the fitness program be gruelling, joyless, Spartan. There is a time and a place for spiritual and recreational activities. Do not dilute essential efforts with spicing, however succulent.

Keep in mind that sporadic, perfunctory, half-hearted activities are as time wasting as they are bound to be ineffective. We must drive with the intensity we do in conditioning of athletic teams or of our soldiers and sailors. Once given the "Full speed ahead" our physical educators know how to achieve the objective. Over in Carmichael, Cal., Coach Le Protti has worked out an intensive plan of this sort for every child in the school system. Suggest you write to him for a reprint.

We are starting from scratch after nearly fifty years of relative neglect of our children. The task ahead of us is a big one. We must first overcome the apathy and indifference of the parents and then persevere until the child accepts the enforced renaissance as part and parcel of his daily life habits. The rehabilitation phase of medicine simmered, a veritable stepchild, until Bernard Baruch vitalized it with millions of dollars in donations and Dr. Howard Rusk proved to be the right man for the job of "selling" the importance of rehabilitation to the laity and to the medical profession. Today the whole world is acutely aware of the importance of the rehabilitation of the disabled. It may well take a fund of a hundred million dollars or more and a vital leader to effect a true RENAISSANCE OF PHYSICAL FITNESS. The ideal leader, in my opinion, would be Ike Eisenhower, a man of wonderful personality, a profound believer in universal physical fitness, a man who lives what he preaches. The essential funds could come from donations contributed by the great mass of us who join Eisenhower in the conviction of the vital need of the RENAISSANCE movement.

The overall emphasis is on FITNESS for our children. No one appears to be concerned about the adults. Every citizen has the inalienable right to go plumb to pot if he so chooses, and he quite apparently so chooses. Did you ever take a look at the miserable, malformed, atonic rolls of bacon, you see slinking along our beaches. No wonder every one uses darkly stained glasses. Twentieth century humanity will not look good alongside the statues of ancient Greeks or Romans, unless perhaps we drape them in Dior masterpieces.

Let's get back to the children. Physical activities require adequate and suitable equipment that may be costly, dis-

Continued on page 16

PHYSICAL EDUCATION IN THE PEACE CORPS

Darrel Royal
Director of Athletics
The University of Texas

"Whether a student wants a lifetime of service to his country or a postgraduate period of experience, I can think of no finer work than the Peace Corps. I am sure that a Peace Corps Volunteer will be placed in many unusual situations, and experience in this atmosphere will benefit him the rest of his life."

Have you ever given thought to coaching a team for Olympic competition? Have you thought it possible to go straight from college into international coaching?

These opportunities may sound incredibly unrealistic, yet they existed and still do exist for some physical education majors working with the Peace Corps in Africa, Asia, and Latin America. Peace Corps service in the field of physical education affords a distinct professional challenge. A Volunteer must often assume far more responsibility than would normally be offered recent college graduates. For young physical education professionals, two years' service in the Peace Corps can be a logical career step since it makes available a broad base of experience and responsibility—a sound foundation upon which to build a future.

For example, Roger Hanson, a graduate of Hamlin University and a teacher and coach at Onania and Askov High Schools in Minnesota, reports from Nigeria, "Since November, I have been teaching track and field six days a week in addition to my regular teaching load. At first I was only coaching my college team . . . news spread that an American coach was at the athletic field every day. I soon was asked to coach many boys, including some of Nigeria's best."

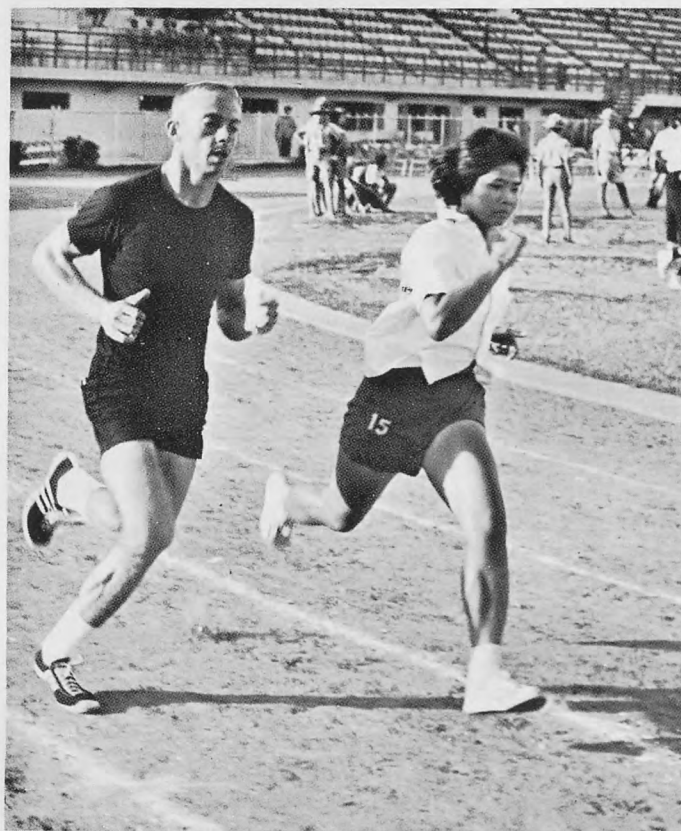
From his room in a *castelle* atop the ancient fortifications on the island of Goree, off the coast of Africa, Douglas Treado, a swimming and water safety instructor at Cornell, reports of his success using Australian resistance workouts in training the Senegalese national track team

for the African Games.

Dick Doughty, a speech major at the University of California and former Recreation Director for the Oakland Recreation Department, is at work in Bandung, Indonesia. Dick's work involves training the Bandung basketball team for national and international competition and introducing the game to high school students, as well as conducting clinics for aspiring basketball coaches and a training school for referees.

But Peace Corps service isn't all glamour and international competition. True, there are Volunteers who have the opportunity to coach international contenders, but

Continued on page 17



THE RENAISSANCE OF

(continued)

couraging potential enthusiasm in promoting effective fitness programs. "Where there is a will there is a way." Back in 1944 I was directing the rehabilitation of thousands of convalescent soldiers at a Florida hospital. We had no equipment when we started. Within a few weeks, my staff, consisting of a few hundred dedicated physical educators, had set up numerous volleyball courts, handball and basketball courts, modified obstacle courses, utilizing anything and everything that a saw and nails could turn into needed equipment. We obtained empty tin cans from the camp kitchens, discarded pieces of one inch iron pipe from the plumbers, filled the cans with cement, stuck the pipes into them and had hundreds of barbells . . . Gaudy point easily dressed up all this home made apparatus. Throughout the day, hundreds of our convalescents milled all over the field having great fun and exercise. Moral:—why not get your P.T.A. to use their own initiative in promoting something similar? Bet there are plenty of empty tin cans, pieces of discarded iron pipe

and cheap cement in your own little town of Siwash . . . Obtain catalogues of playground apparatus and see what you can do to simulate some of the items of most effectiveness in a fitness program.

Time is an essential factor in assuring adequate conditioning. A school child hurrying through a change of clothes, reporting to gym, showering, dressing, return to classes, is not very apt to get much benefit from the brief minutes of actual "fitness" activities. It is evident that the present approach of jamming physical education into the daily class activities has not worked out satisfactorily. Perhaps educational activities should be concentrated to mornings and early afternoons. Then from three to five everyone (children and faculty) report for physical training, even as the athletes do.

That's my story . . . At 70 I am eager to lend a hand in advancing the cause of universal physical fitness. If there is anything I can do to help, drop me a note.

THE PEACE CORPS

(continued)

the majority find challenge working at the very necessary jobs of establishing children's parks and village recreational centers, organizing out-of-doors programs and regional sports leagues. Volunteers are teaching physical education in schools and in "open air classrooms." Each Volunteer finds himself doing an amazing variety of jobs.



There is, for example, Volunteer Jared Dornburg of St. Louis who summed up the situation of many Peace Corps recreation workers when he wrote from Nigeria: "Our activities at the school are enormous . . . the kids are interested in any outside activity which a Volunteer might begin—photography, scouting, art, nature study, dramatics, debate, anything which can give them a glimpse beyond their limited sphere."

Or Margaret Hawxhurst, a physical education and health teacher from Grand Junction, Colorado, who writes from her post in Lima, Peru: "We have been setting up

recreation programs in a couple of *barriadas* (marginal slum areas) surrounding the city. The people here love soccer, volleyball, and a woman's service club in Chimbote has raised funds for cement courts and playgrounds in several *barriadas* . . ."

Other Volunteers find that they must not only tap their professional training, but their imagination and ingenuity in other areas as well. One such experience is that of Russ Studebaker of Tampa, Florida, who reports that he is teaching weaving, in addition to physical education, to the young people of El Salvador. Russ hopes that eventually he will be able to turn this into a profitable industry.

Jim Portman, a Volunteer from Coapolis, Pennsylvania, found a valuable solution to the problem of occupational therapy in the hospitals of El Salvador. He has devised a do-it-yourself "rag-rug" kit following an old Pennsylvania Mennonite's pattern. He has distributed it on a nation-wide basis to hospitals and sanatoriums for use in occupational therapy.

Heavy Responsibility

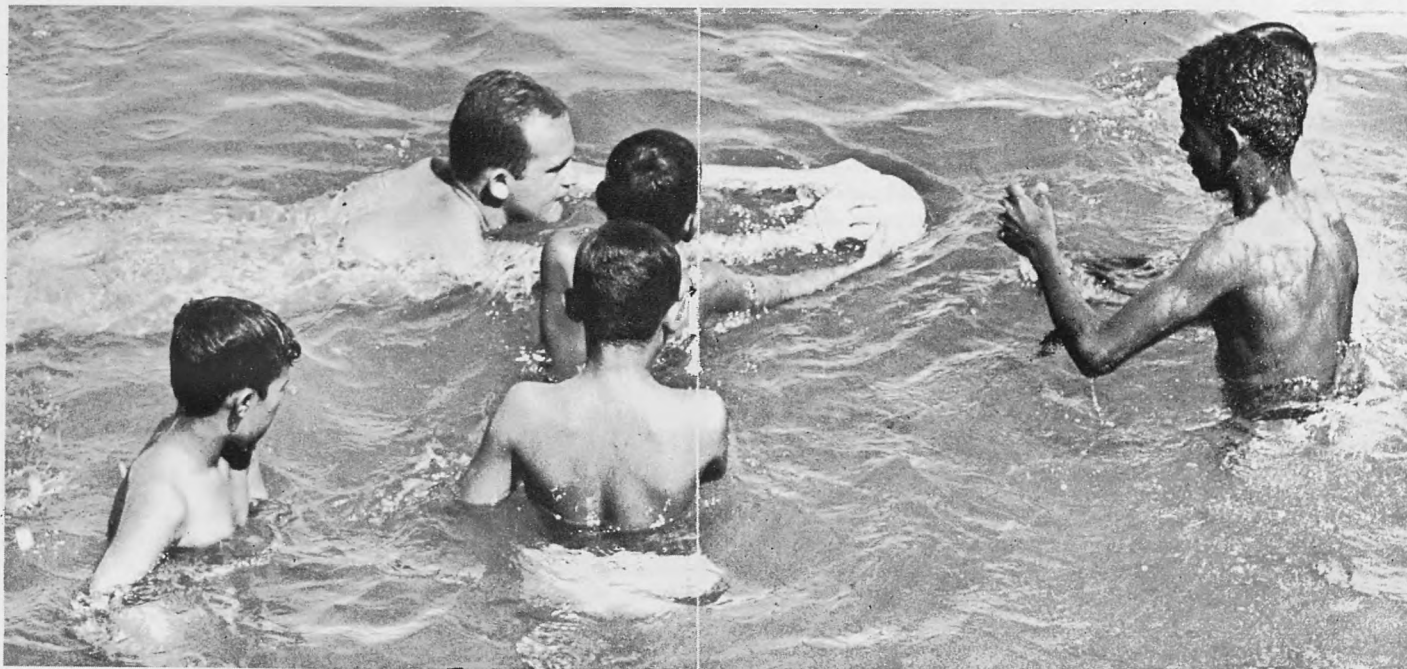
It's quite a trust you'll have—working in the Peace Corps. The solutions to the problems you face, the ways in which you represent America to your students or to the villagers, will all contribute to the image those citizens have of America. It's a demanding task, but it will give you the opportunity to test your own philosophies and ideas about physical education and coaching. You'll learn by trial and error. And you'll gain from the constant exposure to new ideas and techniques that working in an international atmosphere can lend to your future.

A Rich Experience

By the time you return to the United States you will have become something of an expert in at least one foreign language, intimate with the geography of your host country, and familiar with one distant region of the world. You will have had the opportunity to acquaint yourself with a way of life totally unlike your own—new tastes, sounds, and insights will add to your knowledge of the world.

Should you decide on an academic career, you will find Peace Corps service will provide you with unique per-

Continued on page 18



THE PEACE CORPS

(continued)

spectives. Some colleges and universities have established special scholarships for qualified Volunteers, others give college credit for Peace Corps experience. If you decide to enter the Foreign Service, your Peace Corps service will serve as an apprenticeship.

John Fasolino, a former high school coach and physical education recruiter for the Peace Corps, has this to say about service in the Peace Corps: "Through two years in the Peace Corps, a physical educator and coach can be of great service to himself and to his country. The knowledge gained through the culture of the host country, the increased understanding and world awareness, the thoughts expressed in the classroom and on the field all contribute toward making us better people and more informed citizens."

Where Will You Serve?

Peace Corps Volunteers with a specialty in physical education are now serving in:

Chile	Ivory Coast	Senegal
Columbia	Jamaica	Sierra Leone
Ecuador	Malaysia	Thailand
Indonesia	Morocco	Tunisia
		Venezuela

Qualifications

Who May Apply: Any person over the age of 18 who is a United States citizen may apply for service as a Peace Corps Volunteer. There is no upper age limit. Married couples without dependent children under 18 will be accepted if both can do needed jobs as Volunteers. Volunteers must be in excellent physical and mental health.

How To Apply: You may apply by filling out a Peace Corps Volunteer Questionnaire. Write to the Peace Corps, Washington, D. C. 20525. Ask for the Peace Corps booklet and the Volunteer Questionnaire. The latter serves as a combination application and inventory of skills, interests, and experience.

Foreign Languages, Culture: Volunteers will not need to have previous knowledge of foreign languages and customs when applying for Peace Corps service. They will, however, receive instruction in the language and culture of the host country in a special training program.

Pay and Allowances: During the training period all necessary travel, books, food, housing, incidentals, and medical care are provided by the Peace Corps. During overseas service, Volunteers are paid an allowance sufficient to provide simple, healthful, and unpretentious living.

Volunteers receive a readjustment allowance of \$75 for each month of service. In two years, this would amount to a lump sum of about \$1,450, after taxes. However, during service, while these funds are accumulating, they may be used to repay educational loans previously incurred.

Travel and Leave: Volunteers receive a total of 45 days leave. During leave time they will be paid their usual living allowance. A small additional allowance will be provided for travel away from their duty stations. Volunteers are encouraged to use their leave to travel in the host country or to visit neighboring countries.

Disability Benefits: Disability benefits, including medical care, will be provided and any illness or injury incurred in the line of duty will be covered.

For more information and an application, write:

PEACE CORPS
Washington, D. C. 20525
Attn.: Office of Public Affairs

THE JOURNAL OF THE NATIONAL ATHLETIC TRAINERS ASSOCIATION

PUBLISHED 4 TIMES YEARLY

Thomas E. Healion, Advertising Manager
Athletic Department

Northwestern University, Evanston, Illinois

CLOSING DATES:

Feb. 20th issue - close on Jan. 31st, 1964
May 20th issue - close on April 30th, 1964
Aug. 20th issue - close on July 31st, 1964
Nov. 20th issue - close on Oct. 31st, 1964

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Outside back cover	\$175.00
Inside covers	165.00
Full page	140.00
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Full page	50.00
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PAGE SIZES:

These sizes can be adjusted to fit individual needs.

Full page	- 7½" wide by 9½" long
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CIRCULATION:

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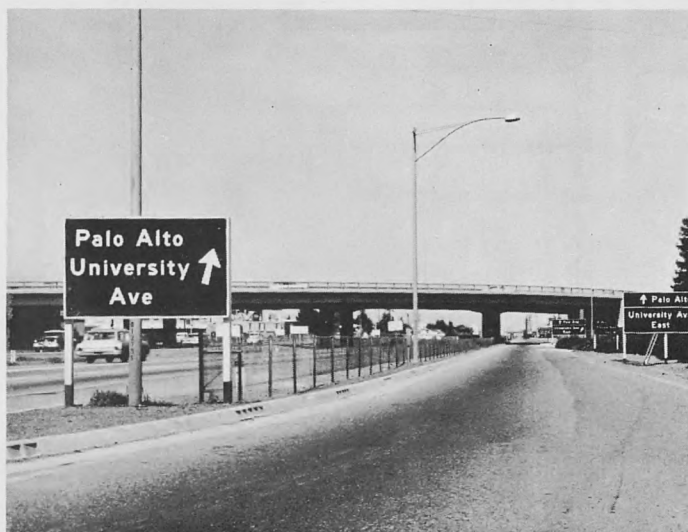
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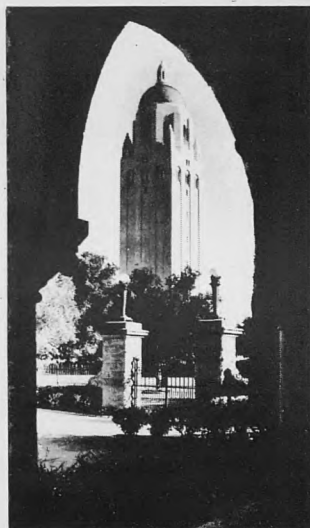
Palo Alto offers an atmosphere for getting things done! A university of high degree, a world center of research and development, a home of writers and authors of renown, a collection of talented and capable people in many professions . . . in short, a stimulating environment plus a veritable gold mine of outstanding talent. Palo Alto's pleasant weather, its natural charm and beauty, its modern facilities and its proximity to San Francisco — one of the country's most interesting cities, provides an unexcelled combination for convention success.



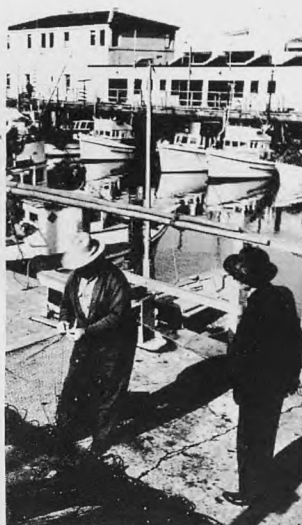
Modern freeways provide convenient bus and car access to Palo Alto.



A world of shopping opportunity abounds in nearby modern centers such as this.



Stanford University, with its famed Hoover Tower, influences many aspects of Palo Alto's character.

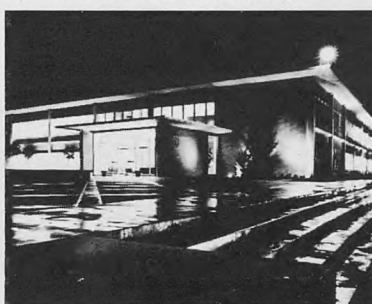


Fisherman's Wharf is but one of nearby San Francisco's many attractions.

Picturesque vineyards in the nearby Saratoga Hills offer one of many interesting side trips.



Palo Alto firms are in the vanguard of national electronics leadership.



Palo Alto-Stanford Medical Center typifies nationally recognized achievements in medical services.



Nearby Stanford Research Institute is one of the largest applied research organizations in America.

Palo Alto is in the heart of the expanding California Peninsula. Just 32 miles south of San Francisco, Palo Alto is easily accessible by freeway, plane and train and convenient to the Bay Area's many attractions. An area of beautiful homes and gardens in the sunshine belt of Santa Clara County, Palo Alto is a rare blend of dynamic space-age development and broad cultural historical significance. Whichever direction your interests take, Palo Alto offers ample opportunities to express them.

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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.

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Johnson & Johnson

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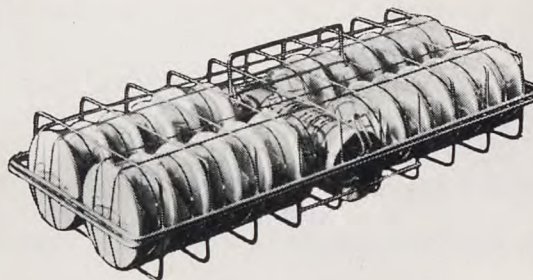


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