

# TRAINERS JOURNAL

SECTION

NATIONAL ATHLETIC TRAINERS ASSOCIATION

1942

No. 7

Official Publication  
Of the National Athletic  
Trainers Association

Keeping Your Key Boys in  
There  
Lil Dimmitt

Modern Basketball as Viewed  
from the Training Standpoint  
Dr. Wilbur Bohm

Dr. Wilbur O. Bohm, Trainer  
O. E. "Babe" Hollingberry, Football Coach  
Washington State College



bunt toward first, the shortstop  
second base and on a sacrifice bunt  
third, the second baseman covers  
runner on third, the shortstop  
keep on his toes to cut off the run.  
the ball elude the pitcher or third  
On a run down between third  
ne, the shortstop backs up the  
man, while the pitcher backs up  
ner, running the potential scorer  
third base.

### The Third Baseman

a player designates his desire to  
base, he is asking for respon-  
The fact that he is the nearest  
to the batter adds to that re-  
y. He must play back to get  
it balls and yet be ready to come  
scoop up the bunt. On a drag  
a man on first, the throw  
to first. Very seldom will there  
e to force at second, especially  
nd-run play is on. On a sacri-  
er, an attempt at a double play  
ed. The coach should set up a  
defense which will give the  
man the knowledge necessary  
he play. With men on first or  
a man on second, only with a  
stem will the baseman know  
is to play the ball or drop back  
base and let the pitcher try  
e play.

stant practice, both on the  
all "skull" sessions, will bring  
rros, less entanglements and  
s. The results will not always  
e score book but will be obvi-  
ponents are fearful of trying  
they fall victims to the effec-  
which meet each situation.

### ing Boys Baseball

- rip on bat too tight.
- ing,
- explain and demonstrate,
- Use of bunt
- (1) As a sacrifice.
- (2) As a try for a hit-drag  
bunt.
- Shifting of feet and hands  
after the ball has left the  
pitcher's hand.
- Starting to first base after  
bunting.
- Placement of bunts.
- Proper method of holding  
the bat.

- mimetics.
- irect arm position.
- low-through.
- ifting of weight.
- ued on page 46)

# THE TRAINERS JOURNAL SECTION

Official Publication National Athletic Trainers Association

March, 1942

No. 7

Officers National Athletic Trainers Association  
For 1941-1942

President, Lloyd Stein, University of Minnesota  
1st Vice-President, John Kelly, New York University  
2nd Vice-President, Henry Schmidt, Santa Clara University  
3rd Vice-President, Wilbur Bohm, Washington State College  
Executive Secretary and Editor of Trainers Journal, Bill Frey  
Office of Publication, Iowa City, Iowa

## Annual Meeting of the N. A. T. A.

AS the time set for our annual meeting (two divisions) approaches, we have more information for you. As announced previously the Eastern division will meet at the time of the Penn Relays. Frank Weichec of Temple will have charge of this meeting. The Western division of the Association will hold its meeting at the time of the Drake Relays in Des Moines. The Fort Des Moines Hotel has been selected and the time will be announced in the April issue. Lloyd Stein, the president of our Association, will direct this meeting.

The agenda include the election of officers, president, first vice-president, second vice-president and third vice-president. The secretary-treasurer and the present trustees continue in office. Because of the necessity of two meetings, all nominations for the officers should be mailed at once to the home office. The financial report of the association will be presented at both meetings.

The discussions following the business sessions will be open to all athletic trainers and coaches interested in training problems. Those men, whether members or not, planning to attend either of the meetings should advise the home office at once.

## Conference Chairmen

IN last month's issue twenty conference chairmen were announced. Two more acceptances have been received. Lil Dimmitt, Texas A. and M., will represent the Southwest Athletic Conference and Davis Sandlin, University of Chattanooga, accepts the appointment as representative of the Dixie Trainers Association. Members of the National Athletic Trainers Association are urged to consult the list of conferences as published in the February issue. If your conference is not represented communicate with us and offer your services. The athletic trainers of each conference are to be called together at the time of the various spring track meets.

## UNDER THE SHOWERS



THE author of the article *Keeping Your Key Men in There*, Lil Dimmitt, is probably one of the best known figures in Texas athletic circles. After attending Southwestern University he took a fling as cattle ranchman, serving later as mayor of Georgetown. He resigned that position in 1923 to become head coach at Beaumont High School. He continued in that position with the exception of one year when he coached at Lamar Junior College until 1935 when he went to Texas A. and M.



IN accepting his new position as chairman of the North Central Intercollegiate Conference, A. D. Dickinson writes, "I am more than willing to do anything within my power to further this important work which, at the present time, seems to me more important than ever before." Dickinson is head coach of track at Iowa State Teachers College and is also interested in the training program there. You trainers in the North Central Intercollegiate Conference will find him willing to help you in any way he can, so do not hesitate to write him for information.



IF you ever have anyone bursting into your training rooms, wearing a big broad smile and start to work on you regarding the Trainers Association, you will know it is big Jim MacDonald, head trainer of Western Michigan College, and recently appointed chairman of the Central Collegiate Conference. James A., as he is known on the college campus, has worked every spare moment to extol the virtues of the association and has every reason in the world to believe that his work has not been wasted. Your editor eagerly awaits the spring of every year because of the annual visit of James A. at the home office here in Iowa City. A firm believer in the fundamentals of training and willing to admit always that perhaps the other fellow has a better way of doing things has made MacDonald one of the popular trainers in the association.



FROM up in the land of the "Black Bears" comes a man who in years of actual training can not be matched by any one. The association feels very grateful in his acceptance of the chairmanship of the Maine Intercollegiate Athletic Conference. We present Stanley M. Wallace, head trainer and intramural director of the University of Maine.

# Taping for "Hamstring" Tears

By Bill Frey

Secretary-Treasurer, National Athletic Trainers Association

## High School Trainers Lesson No. 7

In the lesson last month on the massaging of the thigh, I cited a specific case which had come to my attention that of Fred Wolcott, the great hurdler. Having received a muscle injury during the week in the Kansas Relays, he was taped for the hurdle event at the same Relays. Wolcott has run a great number of races since, so we may safely assume that the bandaging not only protected the muscle from further injury in the meet, but helped the muscle return to normalcy.

The injury commonly called "hamstring" is a painful one. It appears in a group of muscles known as the hamstring group. It is rarely found in athletes participating in football, basketball or baseball, but occurs frequently in track.

The injured athlete will not be able to get full extension of his leg; there may be a pulling sensation directly back of the knee, but more often it is noticed in the area designated by 2 in Illustration 1. Immediate swelling and discoloration may be noticed in this area, although the latter may not appear for two or three days.

The athlete will recover entirely from this injury, even if he be left entirely alone, for rest is the best thing for muscle injuries. The trainer, however, may perform a distinct service here and help make the athlete available for competition at an early date. Emphasis must be put first of all upon the fact that the boy must not be returned to competition before the injury is sufficiently healed to prevent a further or permanent injury and he must be properly taped.

In following the instructions on the taping of these injuries, the trainer should have the athlete lie flat on his stomach.

In Illustration 1, the area marked 1 is the point of attaching the bandage. The section marked 2 shows the area injured; section 3 designates the area with the most pain. Section 4 marks the area just back of the knee cap. It is possible that a section of tape will have to be run from the area marked 5 to that marked 1, using binders below area 4 and above area 3, making sure that the knee is flexed a little during the process of applying the tape.

In Illustration 2, note the letter A. The

line drawn under this letter shows the relationship of the start of the bandage to the knee cap as this line runs directly across the leg back of the knee cap. This illustration further shows the seven strips of overlapping two-inch tape which should be applied from the outside of the thigh toward the inside.

The strips of tape shown in Illustration 3, overlapping and crossing each other, run along the muscle structure of the leg. Starting with tape 8, on the outside of the leg, apply the tape as numbered, pulling each strip in an upward direction across the first seven strips shown in Illustration 2.

Overlapping strips 18 to 25 inclusive should be applied as shown in Illustration 4.

Illustration 5 shows the binders at the top and bottom of the taping.

Care should be taken that they are loose enough for comfort.



Illustration 1

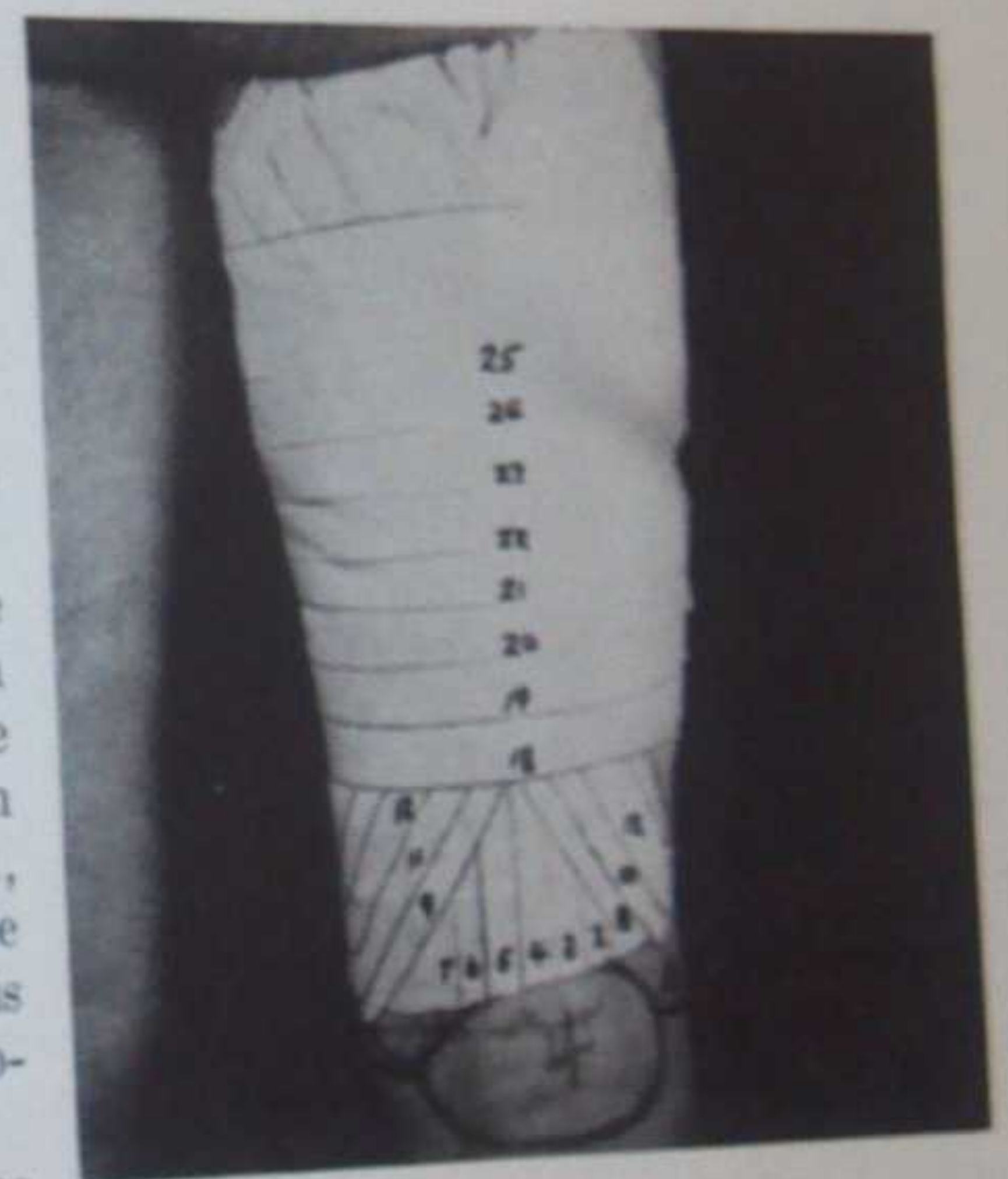


Illustration 4



Illustration 2



Illustration 3

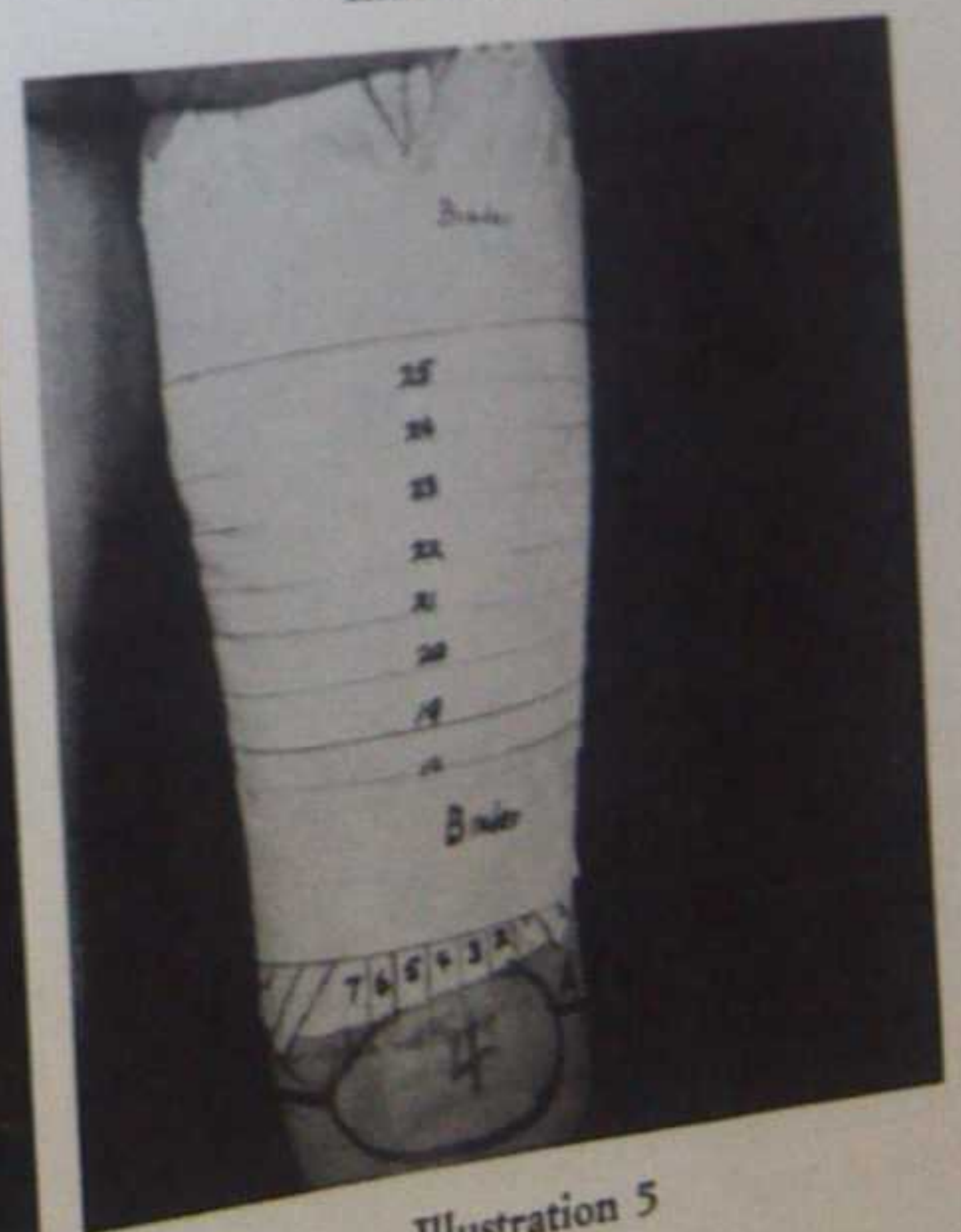


Illustration 5

...HOWERS  
...the article Keep  
...Men in There, Lil  
...obably one of the  
...res in Texas ath-  
...After attending  
...niversity he took a  
...ranchman, serving  
...e resigned that po-  
...oach at Beaumont  
...t position with the  
...ched at Lamar Ju-  
...went to Texas A.  
...is new position as  
...the North Central  
...Conference, A. D.  
...s, "I am more than  
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...han ever before."  
...ck at Iowa State  
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...do not hesitate to  
...ve anyone bursting  
...ining rooms, wear-  
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...onald, head trainer  
...higan College, and  
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...s he is known on the  
...y spare moment to  
...tion and has every  
...at his work has not  
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...nual visit of James  
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...ars" comes a man  
...f actual training can  
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...els very grateful in  
...of the chairmanship  
...Intercollegiate Ath-  
...Stanley M. Wallace,  
...ector of the Univer-

teen times each day or even more often.

For exercising the bottoms of the feet, they may be rolled back and forth over the surface of a half pint milk bottle. They should be rolled rather than pushed.

Picking up marbles with the toes is a simple exercise, so simple that it seems childish, but the fellow who does it has stronger arches and feet than the ones who stand by laughing at him.

For strengthening ankles, arches and the calf muscles, the following is one of the best. Place a book, about an inch and a half thick on the floor. Place the toes on the edge of the book, making certain that the heels of the feet are on the floor. Raise the heels from the floor, without taking the toes off the book, elevating yourself as high as possible on your toes.

### *Exercise for the Knees*

Following the massage for the knees as



Illustration 4

old flat irons or burned-out electric irons to the bottom of the feet. Lie on your back and ride an imaginary bicycle, using the same full swing motion you would if riding a bicycle (Illustration 3). The weights will seem light at first but after fifteen times of this motion you will know that they are sufficiently heavy to give you just enough resistance to make the leg, knee and hip muscles work to their full extent.

This exercise will do a fine job of building previously injured knees back to normal strength but, if used with the idea of building healthy joints and muscles to greater strength, many an injury will be prevented.

Illustration 4 shows the correct massage for the muscles of the calf. Use both hands, gripping the muscles firmly; work the hands back and forth across the entire surface of the calf.

# Modern Basketball as Viewed from the Training Standpoint

By Dr. Wilbur Bohm

Athletic Trainer, Washington State College

**U**NDER the tip-off system, the big man was a necessary asset to the championship aspirations of a basketball team. By controlling the tip-off, a ball club could play a possession game, and hold down the scoring to the extent that it was not appealing to the spectators. The modern game, more interesting to the spectators, has been responsible for the stimulation of the "click of the turnstiles" and that is what causes the "watchdog of the exchequer" of the athletic department to grin from ear to ear, since he foots the bills that enables a sport to be carried. The modern game of basketball scores again.

### *Larger Squads Necessary*

Today the small fellow has a chance and is not forgotten. His value to the team has increased, so, naturally, there is an incentive for the player of smaller stature to turn out. With the importance of more frequent substitutions, large squads must be carried; this coincides with the athletic program of today which is stressing "athletics for all."

The University of Oregon's national championship team in recent years, had two short players in Anet and Johansen, and we wonder if they would have had the chance to develop and display their ability, had the old-style game with the center

tip-off survived. With more chance for men of shorter stature to play, we find more candidates out for the team. Hence, we find more individuals getting the benefits of exercise gained through participation in some play activity. This is a big value at this time, especially since we hear so much criticism regarding the lack of physical fitness today. The little man finally got an advantage, and the tall player suffered no serious handicap when the rule change was made.

Today, I think we find more players realizing that they have to be in better physical condition to play the modern game than the game of old. The improved condition means less chance of injury from carrying the increased load of exercise that has resulted. This point also stresses the importance of the basketball player having a thorough physical examination before the start of the season. I am sure that more players especially at the high-school level are having a complete check-up before the start of the playing season. On the whole, we are more certain of the physical condition of our players today.

Even though a coach has a squad limited in numbers, and would not be able to make substitutions as often as he would like to, he can handle the situation by conserving the energy of his players whenever possible and by slowing down the game when the opportunity arises.

I have talked to all of the boys on our varsity squad, most all of whom played at least one year in high school before the rule change was made. They as a group feel that they have much more fun playing the game today. That is another argument for our modern basketball.

### *A Great Amount of Running Involved*

In the last Idaho versus Washington State College basketball game, Captain Kirk Gebert wore a pedometer. Being a guard and playing as he does, he runs only slightly over one-half of the floor, whereas a forward covers the full length of the floor after each basket and goes down on offense. Kirk ran slightly over three and one-fourth miles and played less than one-half of the game. From this we can see the amount of running involved and the necessity for frequent substitutions as too long a period of continuous play would be hard on a boy. The referee blows the whistle frequently in this style of game and the boys get intermittent rest periods along with the five time-outs permitted per game. This gives ten rests that they did not get in the old type of game.

The items that I have enumerated seem to me to be the ones most important in discussing the advantages of the modern game of basketball from the viewpoint of the athletic trainer.

# Warming-Up

By Edgar Stansbury

Department of Physical Education  
Western Kentucky State Teachers College  
Bowling Green, Kentucky

(Continued from February issue)

AT THE outset of exercise, the coordination among the skeletal muscles, the nervous system, the heart, and the lungs is affected entirely by means of the central nervous system. Impulses from the higher centers to the medullary centers bring about greater pulmonary ventilation and a rise of arterial pressure. Thus, the impulses provide an abundant supply of blood to the skeletal muscles, the brain and the heart or sometimes even before, the very beginning of exercise. There is a greater outpouring of impulses from the higher centers to the medullary centers. The acceleration of the heart in exercise is due mainly to inhibition of the cardio-inhibitory center.

It is common knowledge that, in order to function, every living tissue must have nerve connections either directly or indirectly with the central nervous system. A few of the nerve arrangements are listed below:

1. The nerve centers in the medulla oblongata which control both the dia-

phragmic and the intercostal muscles, and the heart rate;

2. The efferent nerve fibers which run from the central nervous system to the muscles, and the afferent nerve fibers which conduct impulses from the peripheral surface to the central nervous system;

3. The cortical patterns which are designed in the cortical region of the brain;

4. The synapses which are located in the central nervous system;

5. The sympathetic nerve centers which control the viscera, etc.

According to William Howell<sup>19</sup> the strength of impulses and their velocities are affected by variation and by temperature:

"The strength of the impulse and its velocity may be modified in various ways by the action of temperature, . . . pressure, etc. Variations of temperature as stated elsewhere change the velocity of propagation of the impulse. The velocity

19. Howell, Wm. H., *Physiology*, 12th Edition, W. B. Saunders and Company, Philadelphia, 1933, pp. 121, 122, 123.

increases with a rise of temperature up to a certain point. So also the irritability as well as the conductivity of the nerve fiber is influenced markedly by temperature. . . . It is an interesting fact that the conductivity of the nerve may be suspended also by deprivation of oxygen. . . . A nerve fiber surrounded by an oxygen free atmosphere will slowly lose its conductivity, and this property will be restored promptly upon the admission of oxygen. Compression of a nerve will also suspend its conductivity without permanently injuring the fibers, provided that the pressure is properly graduated."

The phases of contraction, refraction, and relaxation, and the latent period, all of which are concerned with muscular performance, receive stimulations from the nerve fibers. If the heart does step up the velocity of these impulses going to these units, then warming up does have a decided effect upon the performance, because heat is produced in warming up.

As the tissues become more permeable on account of activity during the warm-up period, the nerve endings in the proto-

all of the boys on our  
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## of Running Involved

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## IT PAYS OFF IN THE PLAY-OFFS

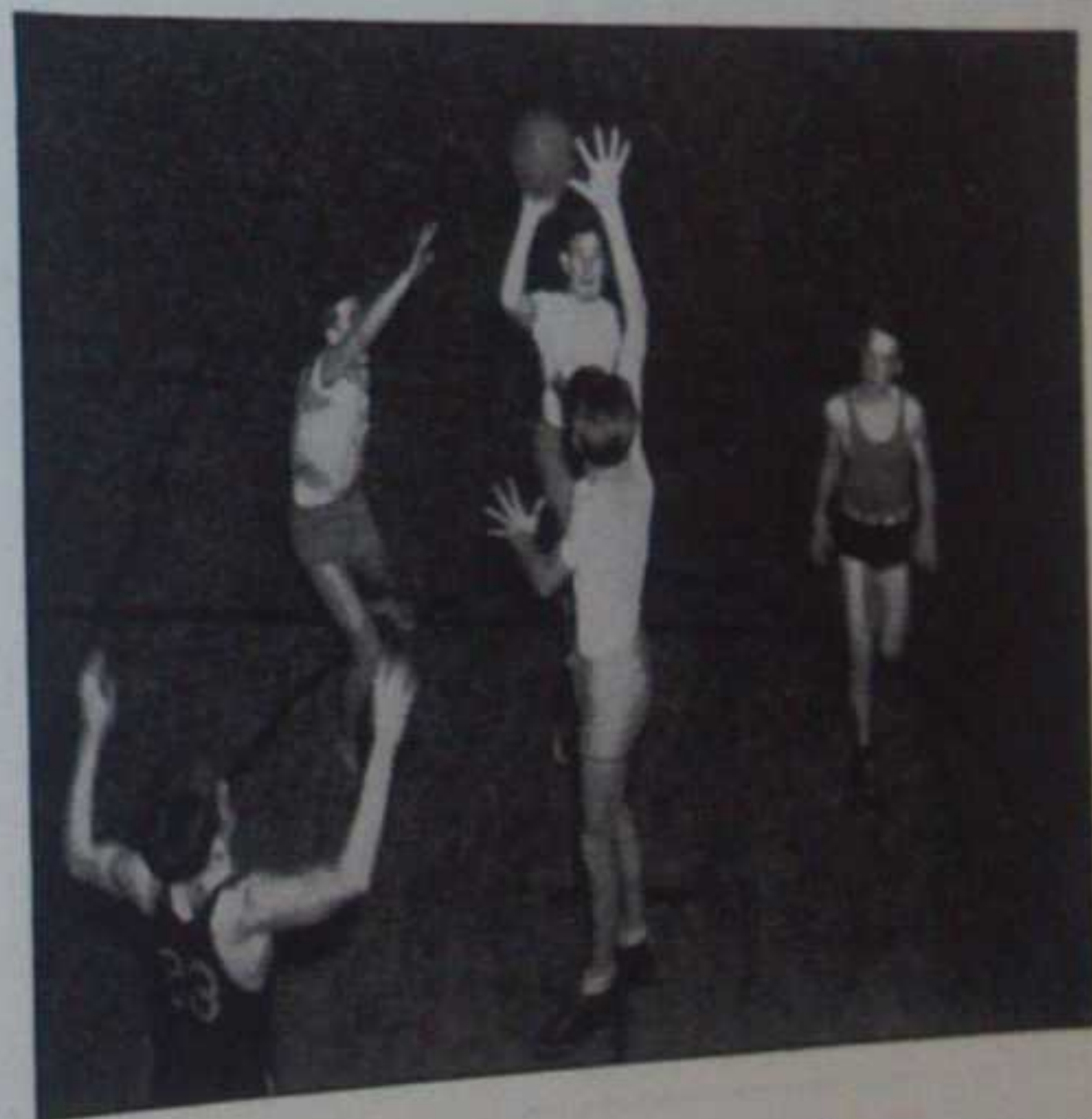
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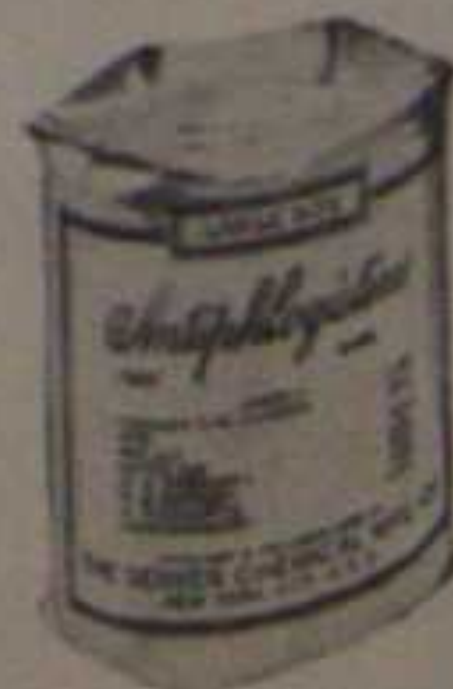
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plasmic material of the muscle tissue become more exposed and more susceptible to irritability. The rise in temperature of the body aids these processes materially. The blood and body temperature over the entire body rises as a result of the warm-up period; thus, every phase of the nervous system becomes more efficient. However, if the warm-up period is carried too far, fatigue will set in. If the heart rate and the minute volume are increased during activity, more blood must be exposed to the different tissues of the body. The medium exchange of oxygen and of  $CO_2$  is through the blood.

### Respiratory Effects of Warming-Up

The respiratory effects of warming up have been considered elsewhere. It is necessary, however, to mention a few phases, not otherwise mentioned.

In increased respiration there is a voluntary reflex response, the center of which is located in the cortical centers. As the warm-up period progresses, the nerve centers stimulate the nerves which control the alveoli of the lungs, and they become more permeable; thus, the passage of oxygen and of  $CO_2$  is permitted more readily. With increased respiration comes increased body temperature.

Glycogen in the presence of  $O_2$  and water breaks up into energy, heat, water, and lactic acid. Energy is used to do work. Some of the heat is used to raise the body temperature, and some is given off with the water as perspiration, expiration, and urine. The intensity of the warm-up will determine the intensity of the above conditions. The exercise which is to follow the warm-up will determine the intensity of the warm-up. Every factor must be considered to get the optimum rate of respiration for the ensuing performance.

A study made by Grollman<sup>20</sup> concerning the effect of mild muscular exercise on the cardiac output shows that mild exercise has very little relationship between oxygen consumption and cardiac output. The study does show, however, that there is a given cardiac output with increased oxygen consumption, but this increase does not parallel the increase of oxygen consumption. During exercise the active muscles take up much more oxygen through the median of the blood than they do during rest. The blood flows faster and consequently, more will pass by a given point.

The flow of blood and the consumption of oxygen will depend upon the severity of the exercise. As the exercise increases, the rate of consumption increases not because the diffusing surface is much greater,

20. Grollman, Arthur, "The Effect of Mild Muscular Exercise on the Cardiac Output," *Am. Jour. of Physiol.*, Jan., 1931, 26, p. 14.

but because the increase in acidity favors the disassociation of hemoglobin. In moderate exercise little or no lactic acid accumulates in the blood; moreover, it is probable that oxygen pressure approaches zero only in regions the most remote from capillaries. As work becomes more severe and of low oxygen concentration approaches the capillaries. Increase in muscular activity, however moderate, changes the carbonic acid content, reaction, and other physio-chemical properties of the tissues.

### Conclusions

Warming up is, and always has been, an important procedure in any form of physical activity where time is an element in competition. Participants have taken advantage of those few minutes prior to the starting of an activity to warm up in order to increase their efficiency, to prevent an injury from the pulling of a muscle, to start a good sweat, to get the feel of the ball, etc.

Many procedures have been advocated as being good warm-up drills; in some circles mass drills, to be practiced prior to an event, are learned by a group. Those individuals who have advocated such procedures surely must know the fallacy of such a custom. If we are to believe the facts as they are outlined in this paper, we must be aware of the great need for each individual to know his own capacity. We can rest assured that there are as many levels of warming up as there are individuals, and that there are as many levels of warming up as there are types of activities. The situation is further complicated by sex, nutritive state, temperature, position of body, psychic conditions, etc. In order to secure the proper results from warming up, a number of physiological factors must be recognized, namely: proper rest, proper food, situation conducive to proper digestion, air free from contamination, proper elimination, proper care of the body, individual limits of fatigue, etc.

We are convinced from evidence herein presented that a number of conditions are gradually being changed in warming up such as the processes in the alimentary canal, the shifting of the blood from the abdominal organs to the organs immediately essential to muscular exertion, the increased vigor of contraction of the heart, the discharge of extra blood corpuscles from the spleen, the deeper respiration, the dilation of the bronchioles, and the mobilizing of sugar in the circulation.

Scientists have not as yet determined the extent of warming up for individuals per activity and per condition; consequently, until such a determination is made, each one of us will have to decide the extent of his own level by trial and error.