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## Safety Procedures for Basketball

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SAFETY PROCEDURES FOR BASKETBALL

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A Research Paper  
Presented to  
the Graduate Faculty  
Central Washington State College

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In Partial Fulfillment  
of the Requirements for the Degree  
Master of Education

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by  
Lorenz D. Flindt Jr.  
August 1962

THIS PAPER IS APPROVED AS MEETING  
THE PLAN 2 REQUIREMENT FOR THE  
COMPLETION OF A RESEARCH PAPER.

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Everett A Irish  
FOR THE GRADUATE FACULTY

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## CHAPTER I

### INTRODUCTION

#### I. STATEMENT OF THE PROBLEM

One of the leading causes of injury and death among teen-agers is accidents. Teachers and coaches in any school situation are responsible for guiding pupils along the road to safety. One way the coach can do this is to design his athletic area with ideal safety precautions.

#### II. PURPOSE OF THE STUDY

The purpose of this study is to consider the many ways basketball can be made safer for the individual participants.

In organizing this paper, the author hoped to gain further insight into just one of the many areas of safety. He believes this material can be useful not only for the basketball coach, but for all individuals interested in protecting one of our nation's most priceless possessions-- its children.

## CHAPTER II

### BACKGROUND

#### I. HISTORY

"Basketball has more players than any other competitive sport in the world" (13:1). It has been estimated that there are over one and one half million players in the high schools and colleges. This does not include the many independent recreational leagues throughout the country.

The tremendous popularity of Dr. Naismith's game is an undisputed fact. Basketball contains all the basic play elements known to the active boy and traditionally is a non-contact sport. Nevertheless, it is a much tougher activity than many people realize (13:1).

#### II. STATISTICS

Statistically, basketball is not as hazardous as football, soccer, boxing, or tumbling. Yet injuries in basketball occur in many ways. These include such mishaps as collisions with extraneous objects, collisions with other players, and tripping over play equipment. Slipping on the floor, twisting an ankle or knee, and poor physical conditioning also occur quite frequently. The National Safety Council states: "Six and six-tenths per cent of all injuries that occur under school jurisdiction take

place while playing basketball" (6:1).

Often, seemingly insignificant accidents which did not receive immediate post-game attention have later become infected and required medical care (13:2).

## CHAPTER III

### GENERAL SAFETY CONCEPTS

#### I. THE PHYSICAL PLANT

In 1953, eighteen per cent of all the accidents on school premises were within the immediate area of the gymnasium. Fourteen per cent of these were in the gymnasium itself, 1.4 per cent were in the swimming pool or showers, and 2.5 per cent were in the dressing rooms (8:1).

The suggested high school playing floor size for basketball is 84 x 50 feet, with a 6 foot clearance at the end lines and a 3 foot clearance along the side lines. All gymnasium doors should open outward and be equipped with panic bars even if this results in added expense. The head of the physical education department in the school should inspect all gymnasium equipment regularly.

Gymnasiums with end lines close to the wall, with permanent bleachers, stair wells, and permanent apparatus equipment should be checked for dangerous corners and protruding equipment. Such places should be adequately covered with plastic or canvas mats (16:124).

Lighting should satisfy the basic requirements for the gymnasiums and should be of equal intensity at all areas of the playing floor. The foot candle recommendation for the gymnasium is 20-30 foot candles. The foot candle

is a measurement of light intensity at a given point on the floor (16:124).

The light intensity is an important factor in eye comfort and efficiency, both important in the game of basketball.

Other factors must be taken into consideration in lighting. Only cursory mention will be made of these; they include the reflection factor, brightness balance, and fenestration. The ideal lighting fixture has both a direct and an indirect component, throwing surface light on the ceiling to give it about the same amount of brightness as the lighting unit itself (16:124).

Other physical facilities will be briefly touched upon here. There should be three exits in each facility that handles groups larger than 600 persons and four exits for groups larger than 1,000 persons. If, at any time, there is any question regarding the maximum spectator capacity, the local fire marshall may be of assistance. All exits should have lighted signs. These exits should never end in a blind alley or lead to a court. There should always be an auxiliary lighting system in all public meeting places such as a gymnasium or auditorium (9:3).

## II. GENERAL RECOMMENDATIONS FOR ADMINISTRATORS

Various agencies could assist the planning committee

in charge of constructing a place of public assembly. All gymnasium activities should be adapted to the physical needs and abilities of the students, in so far as facilities permit.

The word "capacity," as applied to the gymnasium, should include all persons within the room (seated, standing, or participating in plays, athletics, or other events) who would be required to use the regular exit facilities of the room in case of an emergency (9:3). School administrators also have the duty of hiring competent individuals to be in charge of the many facets of bus supervision.

While the players of any team are on the school bus in transit to or from the game, the skill of the driver, the mechanical condition of the bus, and the safety instruction given by the coach will determine whether the players will arrive at their destination without mishap.

There are many problems associated with safe pupil transportation. The purchase of safe vehicles and the maintenance of an adequate shop where the busses can be kept in good mechanical condition are of the utmost importance (3:25).

The school bus must be inspected at regular intervals, daily by the driver and weekly by trained mechanics. Only safe, reliable persons of good health and character must be hired to drive the school busses. Before he is

hired, each driver should satisfactorily pass a physical examination testing blood pressure, heart conditions, eyesight and other related factors (3:25). School boards often require bus operators to maintain an acceptable degree of organic efficiency.

After a driver is employed, he should be required to complete a minimum twenty hour course in school bus driving, taught by a person fully qualified in this field. Any school system employing twenty or more bus drivers should hire a full-time transportation supervisor whose first duty is to promote safety (3:25).

Even if all the above measures have been taken, one of the most important factors in safety during transit is the attitudes of the individuals who ride the bus. If they are cooperative, the bus driver can give his full attention to the road--his prime consideration (3:25).

### III. DUTIES OF THE COACH

The hiring of a competent coach for all sports is a very important factor in accident prevention. The emphasis is upon prevention rather than cure. It is the school administrator's duty to hire only the most qualified coach.

Safety procedures advocated for basketball may also be applied to other similar sports. Conditioning is very necessary in basketball. The feet, ankles, and knees

should be gradually conditioned two or three weeks before the student actually participates in a game (15:85).

For high school as well as junior high school players, the practice sessions should not be too long. The basketball schedule should not be too long. This is usually governed somewhat by state regulations. The skills necessary for basketball players will serve to delay the onset of fatigue; however, this must be regulated by the coach to assure the utmost safety (15:85).

#### IV. THE ATHLETIC TRAINER

The nation's high schools have always been interested in making extra-curricular activities not only more attractive but also safer for students who participate in them. There is much evidence to show that a well-educated athletic trainer is a valuable addition to any school's faculty (2:18).

The addition of a high school trainer indicates that school administrators and coaches desire not only the best equipment and machinery, but also the best safety guidance. The trainer is important for two reasons: He saves the coach time and promotes the individual athlete's safety (2:18).

#### V. THE OFFICIALS

Competent officials should be employed to provide adequate coverage of all basketball games. Poor officiating

has been responsible for many unnecessary injuries in athletics. The alert official checks the playing surface for hazards, seeks to correct improper or unsafe equipment, and does not hesitate to call the coach's attention to a player who may be trying to hide an injury (15:85). The above is a mandatory regulation set forth by the Student Activity Association of the State of Washington.

The use of competent officials should not be limited to interscholastic games. It is of equal importance that intramural games and games in physical education classes be closely supervised. Student leaders may be especially trained for this task (14:265).

## VI. EQUIPMENT

The feet of any basketball player are constantly in danger of injury. Blisters caused from friction appear if constant precautions are not taken. Two pair of socks should be worn, the inner pair of cotton or other light weight material and the outer pair of best quality wool.

The feet can be hardened by the use of many skin-toughening compounds and dusting with a foot powder before and after practice. "Well-fitted shoes with the best rubber soles should be worn. Shoes are probably the most vital equipment worn insofar as safety is concerned" (14:264). Shoes should be properly laced at all times. Playing in street shoes or in bare feet should never be

allowed. Seaton quotes Pete Butler, successful Colorado State College coach, as saying:

The coach should carefully fit shoes on his players as many of the boys do not know how to fit themselves properly. Many high school boys come to college with their feet wrecked from playing in poor quality and ill-fitting shoes. I believe that the most important items are: 1. A good fit with at least a half inch of free toe space at the end. 2. A nonslip sole. 3. A canvas upper rather than leather. 4. A sponge cushion insole in order to absorb the shock of driving from and lighting on a hard floor. 5. A loose lining. 6. A good heel counter, smooth and free from stitching in the middle of the heel, in order to avoid unnecessary friction and the resulting blisters (14:264).

There is considerable controversy regarding taping and wrapping of ankles to prevent injury. This is up to the coach and may be governed by the style of basketball played as well as by the philosophy of the coach.

Seaton quotes Adolph Rupp, famous University of Kentucky basketball coach, who says:

We believe that fewer accidents and injuries occur when the players are in good physical condition and we spend a great deal of time and study on getting every man into tip-top shape. Then we bend every effort to keep them that way. Psychology plays a major role in this process (14:267).

## VII. THE HEALTH EXAMINATION

It is of the utmost importance that all who participate in any athletic program have a complete physical examination. This is especially true of basketball players. Seaton states that the health examination is one of the most important single administrative precautions for the

prevention of accidents (14:86).

The results of the health examination should be recorded on the cumulative record where they can be used for a follow-up. Seaton states:

It is important that the doctor who gives the examinations for athletes knows the physical requirements for each sport, to enable them to eliminate those students who have conditions which might prove dangerous in a specific activity. The health examinations should include the items that affect a person's safety, such as color blindness, range of peripheral vision, and reaction time (14:87).

After the tests have been given, the student should be made aware of his deficiencies and informed of the proper methods of correction (14:89). The basketball coach must judge the player's ability to participate if there are any signs that indicate unnatural conditions overlooked by the examining physician.

Seaton comments as follows on the importance of testing:

Psychological testing devices not only provide the one examined with a knowledge of his deficiencies that may lead to accident proneness, but may inform the athletic coach of unusually well-developed senses among prospective athletes (14:88).

#### VIII. SKILL CONTROLS

Many fundamentals which must be mastered so that safety during play is assured include such items as guarding, pivoting, and ball handling. The coach should train the students in all areas so that the risk of injury will be

at a minimum. Seaton points to the importance of such seemingly minute principles as keeping the head up while dribbling (14:267). This method of dribbling not only provides for a safe course while moving but also increases the dribbler's efficiency.

Balance, also a very important skill in basketball, must be mastered. This is especially true of play in and around the backboard area. Since many accidents occur under the backboard, every precaution should be taken to teach players the proper methods of protection in this area.

#### IX. FIRE PREVENTION

The question of whether the school building is safe for children is, indeed, of major concern. This study is chiefly concerned with the areas in and around the gymnasium. The type of activities carried on in auditoriums, gymnasiums, and other school areas where crowds gather, serve to create some fire hazards (17:22).

When large numbers of people gather, it is often difficult to keep exits open or to have them used efficiently. Many times the audiences are made up of non-school citizens who may be unfamiliar with school safety regulations and even resentful of taking instructions from school officials. This is especially true with the increased use of school facilities for public functions. Viles has this to say regarding safety in the gymnasium or auditorium:

These assembly units should be located at or near ground levels to facilitate safe handling of crowds. 1. There should be ample regular and emergency exits. 2. Admittance should be limited to normal seating capacity. 3. The use of extra seats in aisles should be prohibited. 4. Group loitering at exits should not be permitted. 5. Smoking should be limited to designated protected areas. 6. The seat spacing should meet the standards of the Building Exits Code. 7. Copies of general control regulations should be available in duplicate. 8. Exit lanes should be marked with approved signs and lights. 9. All exit doors should be equipped with panic bolt exit devices (17:23).

All school buildings should be equipped with the proper type and number of hand fire extinguishers. The National Board of Fire Underwriters advises that:

Extinguishers be so distributed that one 2 $\frac{1}{2}$ - gallon water type extinguishers or equivalent will not be more than 100 feet travel distance from any point, and so that there will be at least one for each 2500 square feet of floor area or fraction thereof (4:10).

The use of automatic sprinkler systems can greatly minimize the possibility of delay in case of fire. Indeed, there is no better means of providing life safety in school buildings than through a properly installed automatic sprinkler system (4:11).

The need for outside protection is also of concern. It is important to be certain that a sufficient water supply is available to fight a serious fire within the school. "It is also important to see that the number and placement of fire hydrants in the vicinity of the school will adequately serve the fire department's needs at time of fire emergency" (4:11).

The American Association of School Administrators states that:

Fire plays no favorites. Tragedies have occurred primarily because of human error. If human error could be diminished, the incidence and severity of school fires could be reduced drastically (1:3).

Many individuals and groups of individuals have the duty of promoting a sense of responsibility regarding fires. The liberal use of well-qualified fire inspectors can serve to reduce the possibility of fire hazards.

The superintendent of the school district should assume the major role for a well-coordinated safety program within the school. The superintendent should report regularly to his board, calling its attention to all existing fire hazards (1:7).

The most effective school safety program can be realized when students become actively interested and assume individual responsibilities for school safety. "Children should be taught to observe safety rules at all times and should learn to observe all regulations pertaining to their conduct in an emergency" (1:10).

The National Board of Fire Underwriters emphasizes that the first essential in the event of a fire in any school is to have the pupils leave the building in an orderly manner and to reach a point of safety without injury (4:15). Fire exit drills serve to teach good, efficient evacuation and also teach self-control.

The various fire drills, conducted at least monthly, should be so arranged as to provide a variety of situations for the children. The principal or other person in charge should keep records of these drills and the time required for clearing the building (4:16).

In organizing fire exit drills, the older students can be used as monitors. This serves to make the drill an activity of real interest to the students.

The fire department should be notified immediately upon discovery of fire. It is very important that every school building have adequate means for calling the fire department quickly in case of emergency (4:17). Finally, after all precautions for fire safety have been taken, the school administrator must continually check his school for fire safety.

#### X. TRAFFIC AND EXIT FACILITIES

Many school buildings are constructed at least partly of combustible materials. Even though many facilities are fire-resistive, many materials of a combustible nature cannot be avoided. Therefore, no school building is completely fire-safe.

School buildings house many pupils, some too young to know how to protect themselves in case of danger. It would seem desirable to provide and maintain in all school buildings adequate safe traffic lanes and exits so that

occupants can be transferred quickly from points endangered by fire to safe areas (17:43).

The following policies and regulations regarding traffic in the gymnasium and auditorium are taken from

N. E. Viles:

1. Seating rows open at each end should be limited to 14, and those open at only one end should be limited to 7 seats.
2. Main floor aisles may slope but should not have steps. Sloping aisles should have non-slip surfaces. Aisles should terminate at exits. The minimum aisle width should be 30 inches. This should be increased as the load increases.
3. For large auditoriums special emergency exits, not used at entrances, are desirable (17:46).

## XI. MISCELLANEOUS

There are always numerous miscellaneous items related to safety in any sport. If any of the individuals participating in basketball wear glasses, it is necessary that the lenses be of unbreakable material. Bracelets, rings, watches, and neck chains should never be worn while one is playing basketball or similar sports. It is also quite dangerous if the fingernails of the participants are too long.

The National Safety Council advocates that the gymnasium floor be made of materials that will reduce slipping to a minimum (8:2).

The use of adequate insurance coverage of pupils involved in athletics is receiving increased attention in

our schools.

The equality of competition is a desirable standard to adhere to in arranging games. A first-aid room, adequately stocked, should be made available to all play areas. A physician should be present at all athletic contests and on call during practice sessions (12:2).

## CHAPTER IV

### SUMMARY AND RECOMMENDATIONS

This study has given evidence that:

1. The gymnasium, because of its very nature, is often the place of many injuries.
2. Basketball, because of its large number of participants, is often the source of accidents.
3. Many apparently insignificant accidents later become infected and require medical attention.
4. Many potential accident hazards can be eliminated by adequate pre-planning.
5. Such items as lighting, bleacher types, floor coverings, door openings, fire exits, and fenestration are important aspects to consider when constructing a new facility.
6. The administrator should hire competent officials and coaches.
7. The influence of the coach is very important in reducing accidents.
8. The purchase of safe, finest quality equipment is of utmost importance.
9. Every athlete should have a thorough medical examination before being allowed to participate.
10. It is necessary that bus personnel be of good health.
11. The school vehicles must be in good mechanical condition.
12. Any school system having twenty or more busses should hire a full time transportation supervisor whose duty is to promote safety.

13. The participants in basketball must be in good physical condition before being placed in a game.
14. The basketball schedule should not be so long as to induce staleness.
15. There are distinct advantages derived from hiring an athletic trainer.
16. The use of competent officials for intramural and recreational games is strongly recommended.
17. Since the basketball player's feet are constantly under pressure, it is recommended that his shoes be of finest quality and of the "high top" style.
18. It is recommended that basketball players always wear two pair of socks to reduce friction.
19. Since there is considerable controversy regarding the taping and wrapping of ankles to prevent injury, it is recommended that this be left to the judgment of the coach.
20. Each student should be shown the results of his health examination and the results should be posted in the cumulative record file.
21. The fundamentals of basketball (passing, dribbling, faking, dodging, shooting, defense, and rebounding) must be mastered so that the chance of accidents will be at a minimum.
22. Because the area around the backboard is the place of many accidents, it is recommended that every precaution be taken to teach players the proper methods of protection in this area.
23. Many individuals and groups have the duty of promoting a sense of responsibility regarding fires.
24. No school building is completely fire-safe. It is recommended that there be adequate fire exits, well-lighted, and leading to safe areas.

25. It is recommended there be fire exit drills, at least monthly, under a variety of situations so that the students can be taught efficient-self-controlled evacuation.
26. Common sense should dictate the correct procedure in any unique situation.
27. Bracelets, rings, watches, and neck chains should never be worn while playing basketball.
28. The fingernails should be kept short while playing basketball.
29. Each athlete should have adequate insurance coverage.
30. A physician should be present at all athletic contests and on call during practice sessions.

In writing this research paper, the author hoped to gain further insight into the many aspects of safety. It is his hope that the sport of basketball will continue to be enjoyed safely throughout the years.

## BIBLIOGRAPHY

## BIBLIOGRAPHY

1. American Association of School Administrators, Safety, Sanity and the Schools. Washington: American Association of School Administrators, 1959. 14 pp.
2. Dolan, Joseph P. "The Athletic Trainer in the High School," Athletic Journal, 37:18, September, 1956.
3. Johnson, Kermit A. "The Road to School Bus Safety," National Education Association Journal, 49:25, October, 1960.
4. National Board of Fire Underwriters, Fire Safe Schools. (Pamphlet) Dealing with Fire Safety of School Buildings, 1959. 22 pp.
5. National Safety Council. Safety Education in the Secondary Schools. Chicago: National Safety Council, 1949. 53 pp.
6. \_\_\_\_\_. "Student Accidents by Location and Type." Chicago: National Safety Council, 1959. 1 pp.
7. \_\_\_\_\_. "Safety Education Data Sheet Number 11." Chicago: National Safety Council, 1960. 5 pp.
8. \_\_\_\_\_. "Safety Education Data Sheet Number 22." Chicago: National Safety Council, 1955. 4 pp.
9. \_\_\_\_\_. "Safety Education Data Sheet Number 24." Chicago: National Safety Council, 1948. 4 pp.
10. \_\_\_\_\_. "Safety Education Data Sheet Number 63." Chicago: National Safety Council, 1954. 6 pp.
11. \_\_\_\_\_. "Safety Education Data Sheet Number 73." Chicago: National Safety Council, 1956. 4 pp.
12. \_\_\_\_\_. "Safety Education Data Sheet Number 75." Chicago: National Safety Council, 1956. 4 pp.
13. \_\_\_\_\_. "Safety Education Data Sheet Number 77." Chicago: National Safety Council, 1957. 4 pp.
14. Seaton, Don Cash. Safety in Sports. New York: Prentice-Hall Inc., 1948. 415 pp.

15. Stack, Herbert J. and J. Duke Elkow. Education for Safe Living. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1957. 364 pp.
16. The Athletic Institute, Planning Facilities for Health, Physical Education, and Recreation. Chicago: The Athletic Institute, Inc., 1956. 154 pp.
17. Viles, N. E. School Fire Safety. Washington: U. S. Government Printing Office, 1959. 58 pp.