

EFFECTS OF PHYSICAL CONDITIONING

CPT Ralph B. Kelly
Roster Number 090, Faculty Advisor Group No. 22, ADV 5-73
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SUBJECT: Effects of Physical Conditioning

1. PROBLEM. To determine the effects of physical conditioning on the body structure and functions.

2. ASSUMPTIONS.

a. That there will be no significant change in the near future in conditioning as currently being conducted in infantry divisions.

b. That the units contacted represent a valid cross section of infantry units.

c. That when referring to the effects of physical conditioning the scope of this study will be limited to infantry companies (annex B) under normal field conditions.

d. That the conditions for physical conditioning of those units surveyed were normal.

3. FACTS BEARING ON THE PROBLEM.

a. A survey conducted among infantry company commanders indicates that their unit physical conditioning program uses exercises described in Field Manual (FM) 21-20 (annex C).

b. A review of FM 21-20 indicates that the exercises used in physical conditioning affect the body structure and functions in a constructive manner (2:285-301).

c. An interview with Dr. Joe M. Shockley, Jr., indicates that exercises described in annex C affect the body structure and functions in a constructive manner (annex D).

d. A survey conducted among infantry company commanders indicates that they devote an average of 3.93 hours to physical conditioning each week (annex C).

e. A review of the current Army subject schedule shows that the recommended minimum number of hours of physical conditioning is 3 hours per week (1:70).

f. A survey of infantry company commanders indicates that 83 percent use team sports during weekly physical conditioning periods (annex C).

g. A review of FM 21-20 indicates that team sports should be used as a supplement to physical conditioning (2:181).

h. An interview with Dr. Joe M. Shockley, Jr., indicates that team sports should not be used as a substitute for physical conditioning (annex D).

i. A survey of infantry company commanders indicates that 3 percent of their units would voluntarily participate in physical conditioning after duty hours (annex C).

4. DISCUSSION.

a. All units surveyed indicated that they used exercises described in the Army Physical Readiness Training Program. These exercises do affect the body in a beneficial manner. However, for the exercises to be beneficial, they must be practiced regularly.

b. For the effects of physical conditioning to be beneficial, it is necessary to train a minimum amount of time each week. Those units surveyed indicated that they trained an average of 3.93 hours per week. The minimum time recommended is 3 hours per week. Those units surveyed surpassed the minimum time recommended. Those units surveyed also indicated that only 3 percent of their men would participate in physical conditioning after duty hours. Under the present system, the men of the unit train during duty hours.

c. A significant number of those company commanders responding indicated that they use team sports as part of their physical conditioning program. Team sports should be used as a supplement and not as a substitute for conditioning exercise. Team sports do not provide the proper type of exercise that is rhythmic in nature. These sports do contribute to the increased combat efficiency of the soldier because of their competitive nature and natural appeal. They are primarily beneficial in sustaining interest in the physical conditioning program.

d. The effects of physical conditioning on the body structure and functions are beneficial in nature. However, it is necessary that this conditioning be performed a minimum number of hours per week in order to be truly effective. Units responding indicate that most use team sports. This may reduce the time available for conditioning exercise. Furthermore, company commanders indicate that few of their men would participate in physical conditioning voluntarily after duty hours. This necessitates that physical conditioning continue as part of the recommended program during duty hours.

5. CONCLUSION. The effects of physical conditioning on the body structure and functions are beneficial when a satisfactory training program is maintained.

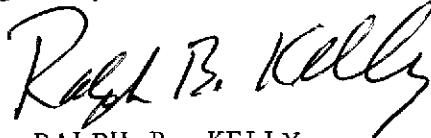
6. ACTIONS RECOMMENDED.

a. That infantry units continue to be encouraged to meet the minimum standards of physical conditioning.

b. That a special effort be made to inform all present and future commanders so they are aware of the effects of physical conditioning and the standards recommended.

c. That commanders be encouraged to include team sports as a supplement to physical conditioning programs.

d. That physical conditioning remain a part of recommended training during duty hours.



RALPH B. KELLY
Captain, Infantry
689-0370

ANNEXES: A--Definitions
B--List of Infantry Units Surveyed
C--Survey of Infantry Company Commanders
D--Interview with Dr. Joe M. Shockley, Jr.
E--Bibliography

CONCURRENCES: (Omitted)
NONCONCURRENCES: (Omitted)
CONSIDERATION OF NONCONCURRENCES: (Omitted)
ANNEXES ADDED: (Omitted)
ACTION BY APPROVING AUTHORITY:

DATE:

Approved (disapproved), including (excluding) exceptions.

Signature

ANNEX A--Definitions

1. Body Structure--"The structure of the body includes the skeletal, muscular, circulatory, respiratory, endocrine, digestive, excretory, and nervous systems. For physical training purposes, it is not necessary to consider all systems. The first five systems are those most affected by exercise. . ." (2:287).

2. Body Functions--"The normal contribution of a bodily part to the economy of the organism" (3:204).

3. Physical Conditioning--". . . relating to the body . . . to put into proper condition for action or use" (3:102 and 374).

ANNEX B--List of Infantry Units Surveyed

1. 25th Infantry Division
Schofield Barracks, Hawaii
APO San Francisco 96557
2. 101st Airborne Division (Airmobile)
Fort Campbell, Kentucky 42223
3. 4th Infantry Division (Mechanized)
Fort Carson, Colorado 80913
4. 82d Airborne Division
Fort Bragg, North Carolina 28307

ANNEX C--Survey of Infantry Company Commanders

This survey was conducted among four infantry divisions (annex B). Of the 180 infantry company commanders sent questionnaires, 80 responded. The following results, expressed in percentages, represent the answers of those who responded.

1. Do you feel the basic combat training/advanced individual training soldier is in satisfactory physical condition when he joins your unit? Yes 70%, No 30%
2. Do you feel that soldiers transferring from other units other than basic combat training/advanced individual training are in satisfactory physical condition? Yes 30%, No 70%
3. By your estimate what percentage of the men in your unit follow their own physical training program? 18%
4. Does your unit follow a physical training program? Yes 95%, No 5%
5. Without a unit physical training program do you feel the men in your unit would conduct their own program after duty hours? Yes 97%, No 3%
6. Do you feel that physical conditioning of the men in your unit is important in the accomplishment of your mission? Yes 99%, No 1%
7. What intensity of physical conditioning is required of your men to accomplish the unit mission? Check one.
 - a. 45% Peak Condition--regular daily exercise program of very vigorous exercise.
 - b. 52% Average Condition--exercise program 2-3 times per week with vigorous exercise.
 - c. 3% Below Average Condition--mild or no regular exercise program.
8. If your unit physical training program is not what you think it should be, what is the problem? (Check as many as apply)
 - a. 15% Lack of facilities
 - b. 10% Lack of trained leaders
 - c. 46% Inadequate time
 - d. 19% Low priority at higher command
 - e. 5% Too many low physical profile personnel
 - f. 6% Other

9. How many training hours per week does your unit devote to physical conditioning?

None 1%, 1 Hour 3%, 2 Hours 8%, 3 Hours 27%,
4 Hours 19%, 5 Hours 38%, Other (6 Hours 1%,
7 Hours 3%), Average--3.93 Hours

10. Check those exercises which your unit utilizes during weekly duty-hour physical training periods.

- a. 88% Army Conditioning Drill #1
- b. 63% Army Conditioning Drill #2
- c. 56% Army Conditioning Drill #3
- d. 25% Running (what distance per week)
- e. 13% Grass Drills
- f. 1% Log Drills
- g. 4% Rifle Drills
- h. 13% Guerrilla Exercises
- i. 5% Isometrics
- j. 8% Obstacle Course
- k. 85% Team Sports
- l. Other (Explain)
11% Road March

11. What is the average age of your unit? 21

12. What is your unit's average physical combat proficiency test score? 401

13. Do you feel all officers should participate in unit physical training programs? Yes 100%, No 0%

14. Do you feel physical conditioning of a unit is the responsibility of the commander? Yes 100%, No 0%

BENEFITS OF EXERCISE

Army Drill #1	X	Increased Red Blood Production
Army Drill #2	X	Strength of Bones
Army Drill #3	X	Strength of Muscles
Running	X	Strength of Joints
Log Drills	X	Muscular Endurance
Rifle Drill	X	Raises Crest Load
Guerrilla Exercise	X	Coordination of Muscles
Isometrics	X	Circulation of Muscles
Road March	X	Faster Recycle of Blood
Grass Drills	X	More Lung Capacity
	X	Slows the Heart
	X	Increased Venous Pressure
	X	Opens Dormant Capillaries
	X	Increased Adrenaline
	X	Increased Cortin

ANNEX D--Interview with Dr. Joe M. Shockley, Jr.

Dr. Shockley is an assistant professor of physical education at Columbus College. He states that physical conditioning is beneficial to the body structures and their functions. He also feels that team sports should be a supplement and not a substitute for physical conditioning. Team sports, he points out, cannot be controlled and have a higher number of injuries as compared to exercises. Conditioning provides rhythmic exercise which team sports do not. Besides those benefits which Dr. Shockley lists below, he states that there are other benefits to the nervous system and digestive system. In addition, he states that the body chemistry functions much better with exercise. Finally, he states that exercise should be vigorous as well as regular in order to be effective. Below is a brief chart on the benefits of exercises conducted by [REDACTED] by Dr. Shockley.

ANNEX E--Bibliography

1. Army Subject Schedule 21-37, Physical Readiness Training. Washington, D.C.: Department of the Army, 1973.
2. FM 21-20, Physical Readiness Training. Washington, D.C.: Department of the Army, November 1972.
3. The New Merriam-Webster Pocket Dictionary. New York: Pocket Book, 1970.