FM 35-20

DEPARTMENT OF THE ARMY FIELD MANUAL

PHYSICAL TRAINING

WOMEN'S ARMY

CORPS

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FIELD MANUAL }

No. 35–20 }

PHYSICAL TRAINING

WOMEN'S ARMY CORPS

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CHAPTER 1

INTRODUCTION

1. Purpose

This manual provides guidance in the planning, execution, and evaluation of physical training in the Women's Army Corps. It is also a guide to individuals in developing and maintaining high standards of physical fitness.

2. Scope

This manual provides information needed to prepare and supervise a physical training program for women at any stage of training, and includes descriptions and illustrations of suitable exercises, games, relays, and sports.

3. Responsibilities

a. *Unit Commander.* The unit commander is responsible for the health of the women in the unit and for their physical condition. It is essential that the commander be aware of the importance of good physical condition and how to attain it. The unit program should promote skills and interests which will enable the individual to assume responsibility for her own health.

b. *Individual.* In the final analysis, each individual is responsible for her own physical fitness. She should be aware of the need to practice good physical, mental, and emotional health habits and to participate in recreational activities appropriate to her age and physical condition.

4. Definitions

a. *Physical Training.* As used in this manual, physical training refers to that phase of military training primarily concerned with the development of strength, stamina, coordination, and flexibility, and the learning of skills and attitudes essential to participation in sports and athletic activities.

b. *Physical Fitness.* Physical fitness is the strength and endurance to meet the demands of normal daily living without undue fatigue and tension. The level of physical efficiency varies according to the age, physical characteristics, and occupation of the individual.

5. Objectives of Physical Training

The objectives of physical training for any unit, regardless of its mission, are to—

a. Provide each individual with the opportunity to participate in physical training activities suitable to her age and physical condition.

b. Develop in each individual strength, stamina, coordination, flexibility, and a sense of accomplishment from having mastered essential skills.

c. Teach individual skills which will be useful in job, social, and recreational situations.

d. Provide a program which can assist the individual in maintaining proper weight standards.

e. Motivate each individual to develop and maintain her own phyiscal fitness and weight control program.

6. Types of Programs

Physical training programs in the Women's Army Corps are divided into four broad classifications. Each is designed to meet specific needs of groups or individuals.

a. *Basic Training.* The level of physical fitness of women who enter the service must be raised quickly to enable them to meet the demands of basic training. Therefore, all WAC basic trainees participate in an intensive, progressive, standardized program of physical training prescribed by Army Training Program (ATP) 21–121. Conditioning exercises

compose the major portion of the program. These are supplemented by posture training, body mechanics, games, relays, and swimming in season. Trainees also participate in off-duty sports on a voluntary basis. Additional guidance for the conduct of this program can be obtained from the current ATP 21–121.

b. Advanced Individual Training. Physical training programs during advanced individual training vary greatly and the training is less intensive than in basic training because of the limited time available. Commanders of WAC student detachments are normally allotted 2 hours per week within the program of instruction for the conduct of physical training during duty time. Such programs may be supplemented with off-duty activities similar to those found in field units. Commanders of permanent party companies which have students attached may include these women in physical training programs for assigned personnel or may establish a separate program designed to meet the needs of the students.

c. Field Units. Reference Department of the Army Pamphlet 21–2.

d. Individual. The program which each individual undertakes to keep herself physically fit is an increasingly important facet of physical training. This program, described in DA Pam 21–2, may be used by itself or as a supplement to physical conditioning classes and organized or individual athletics.

7. Selection of Activities

A wide variety of physical training activities is available for the individual or the group. Choice depends on interest, equipment and facilities available, and the specific objectives to be met. Activities included in this manual are:

a. Physical conditioning exercises;

b. Posture training and body mechanics;

c. Games and relays;

d. Individual and team sports;

e. Swimming and lifesaving.

8. Changes

Users of this manual are encouraged to submit recommended changes or comments to improve it. Comments should be keyed to the specific page, paragraph, and line of the text in which the change is recommended. Reasons should be provided for each comment to insure understanding and complete evaluation. Comments should be forwarded direct to the Commandant, U.S. Women's Army Corps School, Fort McClellan, Ala. 36205.

CHAPTER 2

THE PHYSICAL TRAINING PROGRAM

Section I. GENERAL

9. Definition

The physical training program is a combination of practical knowledge concerning the body, muscular exercise, and athletics designed to develop physical fitness. It consists of two parts—

a. On-duty Program. The on-duty program consists of instruction in those conditioning activities and athletics which develop flexibility, grace, coordination, and basic skills. This program is regularly scheduled and conducted within the unit training cycle.

b. Off-duty Program. The off-duty program consists of recreational and athletic activities in which participation is voluntary.

10. Physical Training Schedule

A schedule is a detailed plan, in tabular form, which lists the hour, unit, place, subject or lesson title, references used, and instructors assigned. It is from the schedule that plans are written for each lesson. Before the schedule is formulated, consideration must be given to the needs of the women, time available, facilities, equipment, climate, and instructor personnel.

11. Lesson Plans

A lesson plan must be carefully developed for each physical training period. This plan is the instructor's guide for presentation (FM 21-6) and must be sufficiently detailed to allow even the most inexperienced instructor to teach a satisfactory class. The lesson plan shown in table I can be used as a model for any class. It combines body conditioning with group games. The warm-up period uses the cadence series. This is followed by exercises to improve the muscle groups selected for specific attention, such as the abdominal muscle group. The remainder of the period is devoted to either games or relays.

Table I. Sample Lesson Plan

Women's Army Corps Detachment
Fort Donelson, Ky.
Physical Training Program
1964–1965

LESSON PLAN

INSTRUCTIONAL UNIT: Conditioning Exercises, Individual Exercises, and Relay.
TYPE: Conference, demonstration, practical exercise.
TIME ALLOTTED: 45 minutes.
CLASSES PRESENTED TO: Members of WAC Detachment, Fort Donelson, Ky.
TOOLS, EQUIPMENT, AND MATERIALS: None.
PERSONNEL: Instructor, 1 assistant instructor.
INSTRUCTIONAL AIDS: None.
REFERENCES: FM 35-20, Physical Training, Women's Army Corps.
STUDY ASSIGNMENTS: None.
STUDENT UNIFORM AND EQUIPMENT: Exercise suit.
TROOP REQUIREMENTS: None.

TRANSPORTATION REQUIREMENTS: None.

OBJECTIVE: To provide participants with conditioning exercises for warm-up.
To present individual exercises for improvement of muscle tone in specific muscle groups.
To include a relay for maximum participation, simplified competition, enthusiasm, and enjoyment.

PLAN:

    I. INTRODUCTION (5 min.)
      A. Review of previous hour.
      B. Scope of current hour.
    II. PRESENTATION

Exercise	Time	Reference (FM 35–20) para
A. Cadence Series	5 min.	24
B. Individual Exercises	20 min.	
1. Head circling		26b
2. Twister		27e
3. Bent-over bobbing		28d
4. Double leg lowering		28h
5. Abdominal contractions		28l
6. Hip roll, knees flexed		29a
7. Hip bouncing		29b
8. Modified push-up		32b
9. Jumping jack		30d
10. Big X		38
C. Relay	10 min.	
Kangaroo Relay		79

    III. SUMMARY (5 min.)
      A. Resume of next physical training hour.
      B. Change uniform, police, and secure area.

12. Methods of Evaluation

Among the various methods for evaluating the program are—physical fitness tests; records, charts, and graphs of individual or group progress; detection of conditions that need correction, such as muscular flabbiness or overweight; and unit morale.

Section II. PLANNING THE PROGRAM

13. Suggested Programs

a. Single Participant. In some units, scheduling difficulties, extremes in age or interest, or other factors make it advisable to use a system of individual participation in activities of the women's own choosing. Under this system each woman is responsible for engaging in some type of physical activity each week and reporting her activity to a designated leader. The advantage of this type of program is that it permits a wide variety of activities to be performed at times which do not conflict with duty requirements. Women who need special help on conditioning, posture, or weight control may be scheduled for additional training. The chief disadvantage of this type of program is the lack of control. Its success depends upon motivation of the women to participate enthusiastically.

b. Small Groups. Small groups may be organized for various activities under selected leaders. This system provides greater control than the single participant program yet permits great flexibility and full utilization of equipment and facilities available. Activities scheduled for groups should be planned to provide special training for women who need help in conditioning, posture, or weight control. It may also be desirable to assign particularly skillful women to groups together so that less skillful women do not have to compete against them in activities.

c. Large Groups. In units where it is practicable to have large groups take part in mandatory physical training at one time, physical training can be closely regulated and an effective, progressive program presented in a minimum amount of time. Conditioning exercises, posture training, body mechanics, and tension-releasing activities such as relays and games form the core of the program. These can be supplemented by voluntary participation in off-duty activities. If facilities permit, it may be desirable to separate skilled women who are interested in organized team sports from the group during conditioning classes so that they can practice team play. Removal of such women from the group not only motivates them toward greater participation in organized athletics but permits more individual attention for the less skilled women remaining in the group.

14. Concurrent Physical Conditioning

Valuable physical conditioning is derived from basic military subjects such as drill and ceremonies and field training. These subjects should be thoroughly exploited to add to the all-round physical conditioning of the women. Movement to and from training areas can also be used to good advantage and women should be encouraged to walk to and from work when practicable.

15. Selection of Leaders

Leadership is very important in the field of physical training, where much depends upon the leader's ability to motivate the women to participate wholeheartedly and actively in the program. Since few units will have qualified physical training instructors, potential leaders must be selected for their natural aptitude, enthusiasm, and interest. These leaders must be trained in instructor techniques, basic knowledge of the physical training program, and the skills they will be required to teach.

Section III. CONDUCTING THE PROGRAM

16. Motivation

To be successful, the physical training program must have the full cooperation of all participants. Since attitudes cannot be forced, every effort must be made to motivate. When women realize that physical fitness will equip them to withstand fatigue and nervous pressure, they will cooperate. Women are interested in their appearance and should be made to understand that body measurements can be improved by exercise combined with a sensible diet. Rewards such as trophies and plaques should be used wherever possible. Use of records, charts, photographs, and other devices to show progress engenders and maintains interest and pride. This method is often particularly helpful when working with those whose physical condition is initially poor. The record of improvement is impressive and serves as a powerful incentive.

17. Methods of Instruction

The success of any physical training program depends upon how well its participants master physical skills. It is difficult for anyone to be well motivated toward activities in which she feels awkward or inadequate because of lack of skill. This is particularly true of beginners and those in poor physical condition. Effective instruction will insure that women learn necessary skills correctly.

a. Techniques of Presentation. Techniques of presentation useful in a classroom situation apply equally well to physical training. Detailed guidance in this area can be obtained from FM 21–6.

b. Use of Assistant Instructors. Demonstrations and practical application of skills play a very important part in physical training. Assistant instructors can be used to demonstrate, thus freeing the instructor to explain the skill being demonstrated. Also, the instructor may be excellent at presenting material but weak in ability to demonstrate specific skills. The use of an assistant instructor for demonstrations relieves the instructor from having to become proficient in every skill to be taught. Assistant instructors are also helpful during

the application phase of instruction. They may be used to check and correct skills as the women perform in mass or to give individual training to slow learners.

c. Training Aids. Training aids such as blackboards, charts, posters, flashcards, vugraphs, opaque projectors, slide projectors, and training films will add interest and clarity to instruction. Assistance in obtaining training aids may be sought from Army Area Training Aids Centers and Subcenters, post instructional aids units, Audio Visual Communications Centers, and civilian agencies such as those described in paragraph 18. In addition, artistic talents of women in the unit may be put to use in designing and making training aids.

d. Commands. Physical training classes requiring mass performance of exercises or other skills should be conducted in a standardized manner. This can be accomplished by use of specific commands to which students respond automatically. Commands recommended are discussed in chapter 3.

e. Class Organization. Classes normally should be organized into three general phases— introduction, presentation, and summary. During the introduction the objective and scope of the hour are stated in such a manner as to motivate women to participate, skills learned during previous hours are reviewed, and warm-up exercises or drills conducted. The presentation phase includes demonstrations and explanations of new skills followed by practical application of these skills under supervision.

The summary contains a critique of student performance with emphasis on ways in which it can be improved, a review of material covered, and if applicable a preview of the next hour.

18. Sources of Technical Assistance

a. On Post. Technical assistance in conducting the physical training program may be obtained through special services. This will include instructional guidance as well as help in setting up unit programs to implement installation activities. In addition to special services, many posts have golf clubs, riding clubs, rifle and pistol clubs, or informal recreational groups which may be helpful.

b. Off Post. Local high schools and colleges, the Young Men's Christian Association (YMCA), Young Women's Christian Association (YWCA), and local recreational leagues or clubs may be useful in connection with the unit's physical training program. Much valuable guidance can be obtained from professional physical training organizations and associations such as the Amateur Athletic Union (AAU) and the American Association for Health, Physical Education, and Recreation (AAHPER), a branch of the National Education Association (NEA). In particular, the Division for Girls and Women's Sports (DGWS) of the AAHPER is a valuable source for official guides, rules, and standards for nearly all women's sports. See appendix I for listing of publications of the DGWS and other professional athletic organizations.

CHAPTER 3

PHYSICAL CONDITIONING

Section I. GENERAL

19. Basic Principles of Conditioning

Physical conditioning should start with a moderate amount of exercise geared to the current physical condition of the individual. Physical impairment may result from too vigorous exercise at the beginning. The amount and degree of difficulty of exercise should gradually increase as the level of physical fitness is raised. Muscle improvement and development are proportionate to the demand imposed on the muscles. If improvement is to continue, demand must increase as ability increases. Once a desired level of physical fitness has been achieved, exercise must be continued if that level is to be maintained.

20. Exercise Commands

To avoid confusion, commands for each exercise must be consistent. Both the instructor and the class must have a complete understanding of each command. Commands for the execution of specific exercises will be found with the description of each exercise.

21. Class Performance

a. *Execution.* The instructor must insist upon proper execution of each exercise since conditioning exercises lose much of their value unless performed exactly as prescribed.

b. *Cadence.* After the exercises have been learned properly, they should always be performed in rhythmic cadence. The cadence may be counted by the instructor, an assistant instructor, or by the entire class.

c. *Cumulative Count.* Cumulative count is a method of indicating on the first numeral of the count the number of repetitions of an exercise. Thus, for a 4-count exercise the count is: 1-2-3-4, 2-2-3-4, 3-2-3-4, etc. Using a cumulative count provides the class and instructor with an excellent method of counting the number of repetitions that have been performed.

22. Exercise Positions and Commands

Certain positions are used for the execution of conditioning exercises. Positions described below are those used for exercises in this manual.

a. *Standing Positions*

    (1) *Standing position.* Standing position, arms at sides, feet together. Commands are: 1. Standing position, 2. TAKE.

    (2) *Erect stand.* At the command of execution, stand with feet in position of attention, rise on toes, and spread heels apart until feet are parallel. Legs are kept straight so that the weight of the body rests equally on both feet. Commands are: 1. Erect stand, 2. COME.

    (3) *Stride stand.* At the command of execution, jump to a stride position, and stand with feet parallel, from 18 to 24 inches apart, and legs straight so that the weight of the body rests equally on both feet. Commands are: 1. Stride stand, 2. JUMP.

b. *Sitting Positions*

    (1) *Demonstration position.* Sitting position at ease, taken by the class in order to see demonstration. Commands are: 1. Sitting position, 2. TAKE.

    (2) *Long sitting position.* Seated on

ground, legs outstretched and together, back straight. Commands are: 1. Long sitting position, 2. TAKE.

c. *Lying Positions*

 (1) *Back lying.* Lying on the back, face up, body outstretched, with toes and heels together, and arms at sides. Commands are 1. Back lying position, 2. TAKE.

 (2) *Front lying.* Lying face down, body outstretched, with toes and heels together, hands beneath shoulders. Commands are: 1. Front lying position, 2. TAKE.

Section II. CADENCE SERIES

23. General

The cadence series is designed to provide exercise for every large muscle group in the body. The first exercise is based on arm swinging; the second, on arm flinging. The series then progresses downward from the neck muscles to the shoulders, the trunk, and the legs. When done in quick cadence, these exercises may be used for warmup; if performed slowly and with precision, they may serve as development exercises. For best results, it is essential that the exercises be performed in the order prescribed.

24. Cadence Series

a. *Starting Position.* Stride stand, right hand behind back.

b. *Movement.*

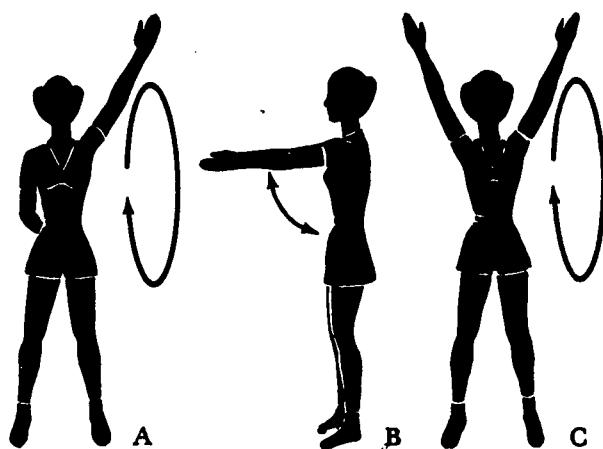 (1) *Single and double arm circling* (fig. 1). Swing left arm in circle: forward, up, back, and down 6 times (A, fig. 1). Swing both arms forward to shoulder level (B, fig. 1). Swing both arms down to starting position and place left arm behind back. Swing right arm in circle: forward, up, back, and down 6 times. Swing both arms forward to shoulder level and down. Swing both arms in circle: forward, up, back, and down 6 times (C, fig. 1). Keep swinging arms as close to body as possible.

 Transition. Swing both arms forward to shoulder level. Swing both arms down to starting position.

 Count. Circle–2–3–4–5–6–forward–down; right–2–3–4–5–6–forward–down; both–2–3–4–5–6–forward–down.
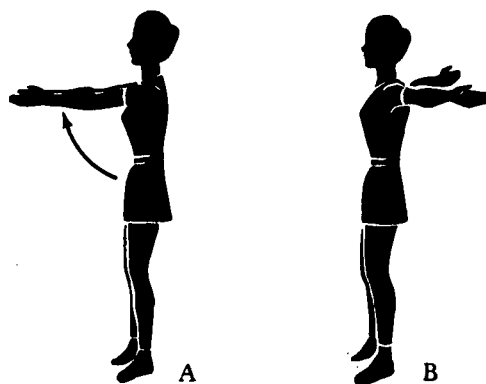

Figure 2. *Double arm swinging.*

 (2) *Double arm swinging* (fig. 2). Swing both arms forward to shoulder level (A, fig. 2). Fling both arms to side and back as far as possible, keeping arms at shoulder level (B, fig. 2). Swing both arms forward and down

Figure 1. *Single and double arm circling.*

to sides. Perform these 4 movements 8 times.

Transition. Stride standing, arms at sides.

Count. Forward–fling, forward–down; 2–fling, forward–down; to 8–fling, forward–down.

Figure 3. Head turning.

(3) *Head turning* (fig. 3). Turn head as far as possible to left. Turn head as far as possible to right. Hold head erect during turn. Repeat 8 times.

Transition. Head returned to normal position.
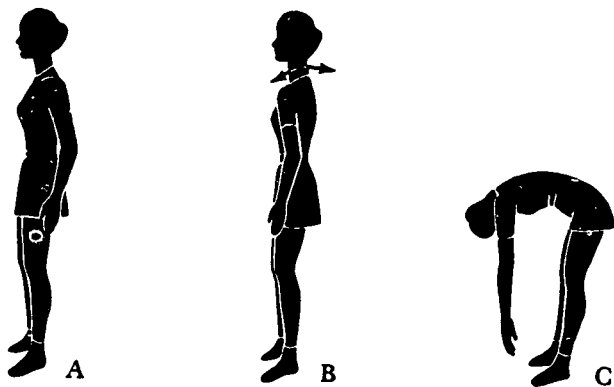
Count. Left–right; 2–and; 3–and; to 8–front.

Figure 4. Shoulders backward and forward.

(4) *Shoulders backward and forward* (fig. 4). Pull shoulders back as far as possible (A, fig. 4). Pull shoulders forward (B, fig. 4). Hold arms at sides during exercise. Repeat 8 times.

Transition. Bend trunk forward from hips, arms hanging loosely (C, fig. 4).

Count. Backward–forward; 2–and; 3–and; to 8–bend.

Figure 5. Trunk twisting, arm flinging.

(5) *Trunk twisting, arm flinging* (fig. 5). Fling arms up to left and at the same time twist upper body to left, keeping body in bent-over position. Repeat right. Keep trunk bent forward, head following direction of fling, and knees straight. Repeat 8 times.

Transition. Return to erect stand position, making quarter turn left.
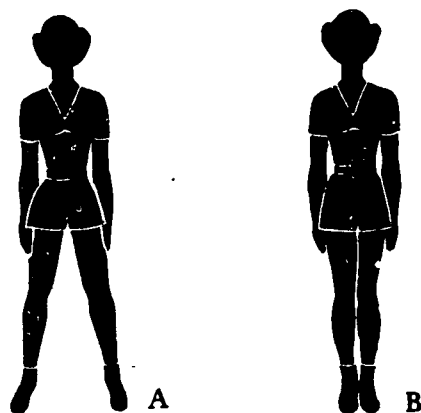
Count. Left–right: 2–and; 3–and; to 8–turn.

Figure 6. Stride jumping.

(6) *Stride jumping* (fig. 6). Jump to stride stand (A, fig. 6) and back to

erect stand (B, fig. 6). Jump to stride stand and on next jump make quarter turn left, landing with feet together. Repeat 4 times.

Transition. The series ends with body in erect stand position facing original direction.

Count. Apart–together, apart–turn; 2–together, apart–turn; 3–together, apart–turn; 4–together, and–stop.

Section III. EXERCISES FOR VARIOUS BODY PARTS

25. General

Examples of appropriate exercises for the development of specific muscle groups in various parts of the body are included in this section. If additional exercises are desired, parts of the cadence series or posture exercises may also be used. It is advisable to include at least one exercise for each part of the body in every physical training class. Additional exercises for selected muscle groups may be added according to the needs of the women. However, too much emphasis on any one muscle group should be avoided, and exercises from the same muscle group should not be performed consecutively as this may produce undue muscle fatigue.
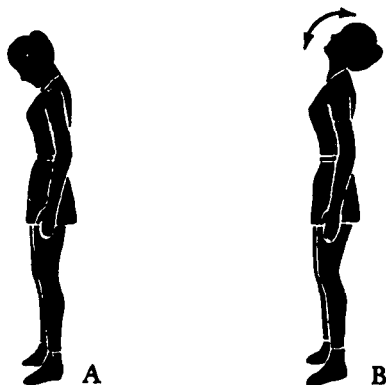

Figure 8. Head circling.

(3) *Count.* Forward–up; back–up; 2–up; back–up; 3–up; back–up; etc.

b. *Head Circling* (fig. 8).

(1) *Starting position.* Erect stand, arms at sides, neck relaxed, letting chin drop to chest.

(2) *Movement.* Rotate head very slowly to left as if pushing. Continue to circle

Figure 7. Head lowering forward and backward.

26. Exercises for Neck

a. *Head Lowering Forward and Backward* (fig. 7).

(1) *Starting position.* Erect stand, arms at sides.

(2) *Movement.* Drop head forward to chest (A, fig. 7). Lift head to normal position. Drop head backward (B, fig. 7). Lift head to normal position. Perform as 2 movements: forward drop followed by backward movement. Repeat.
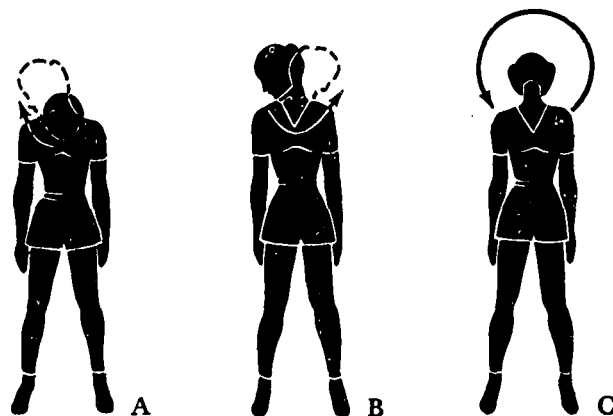

Figure 9. Head swinging and circling.

backward, right, and front. Rotate 4 times to left. Repeat 4 times to right. Repeat, alternating left and right.

    (3) *Count.* Left–2–3–4, right–2–3–4; 2–2–3–4, right–2–3–4; 3–2–3–4, right–2–3–4; etc.

c. Head Swinging and Circling (fig. 9).

    (1) *Starting position.* Stride stand, arms at sides, head dropped to chest.

    (2) *Movement.* Swing head to right until in line with right shoulder (A, fig. 9). Swing head in half-circle until in line with left shoulder (B, fig. 9). Swing head in complete circle to right (C, fig. 9). Repeat left. Repeat, alternating right and left. Perform rhythmically.

    (3) *Count.* Right–and–left–and–circle around, left–and–right–and–circle around; 2–and–left–and–circle around, left–and–right–and–circle around; 3–and–left–and–circle around; etc.

27. Exercises for Shoulders and Upper Back

a. Single Arm Circling (fig. 10).

    (1) *Starting position.* Stride stand, right arm behind back, left arm at side.

    (2) *Movement.* Swing left arm in circle: forward, up, back, and down 6 times. With left arm behind back, swing right arm in circle: forward, up, back, and down 6 times. Repeat, alternat-
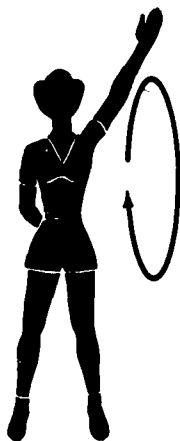

Figure 10. Single arm circling.

ing left and right arm. Keep swinging arm as close to body as possible.

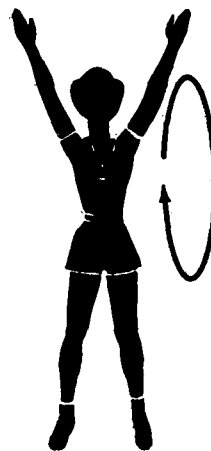   (3) *Count.* Circle–2–3–4–5–6, right–2–3–4–5–6; 2–2–3–4–5–6, right 2–3–4–5–6; etc.

Figure 11. Double arm circling.

b. Double Arm Circling (fig. 11).

    (1) *Starting position.* Stride stand, arms at sides.

    (2) *Movement.* Swing both arms forward, up, back, and around 6 times. Repeat. Keep motion continuous and arms as close to body as possible.

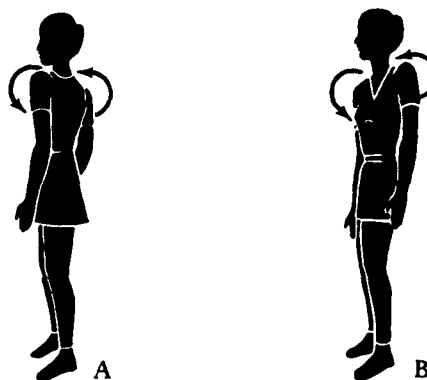   (3) *Count.* Circle–2–3–4–5–6; 2–2–3–4–5–6; 3–2–3–4–5–6; etc.

Figure 12. Alternate shoulder circling.

c. Alternate Shoulder Circling (fig. 12).

    (1) *Starting position.* Stride stand, arms at sides.

    (2) *Movement.* Circle left shoulder for-
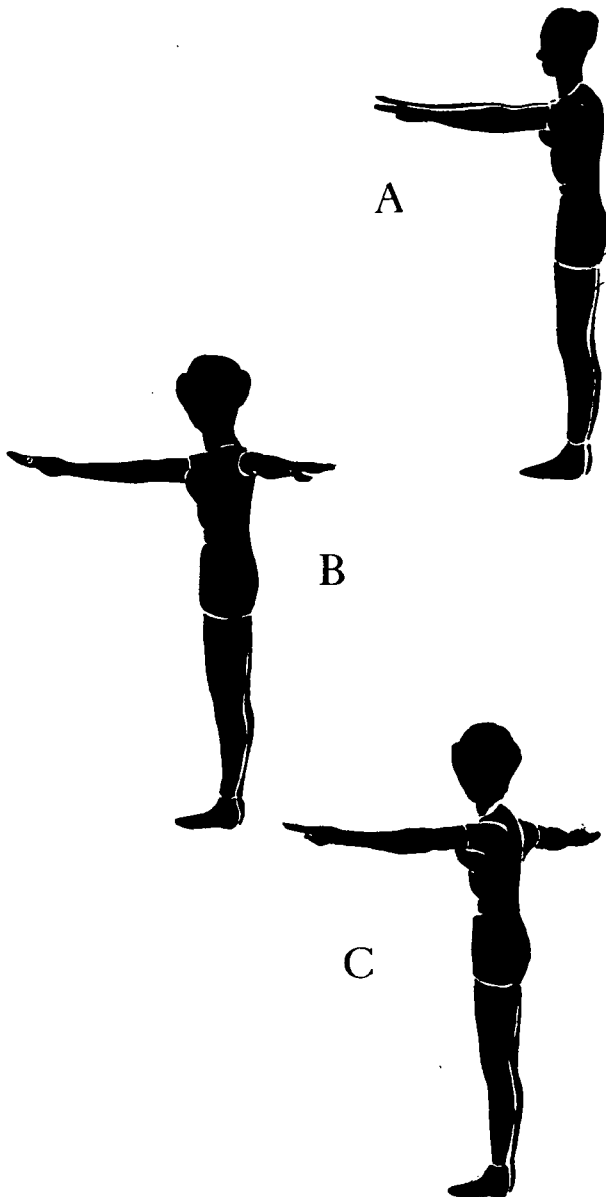
A

B

C

Figure 13. Single arm twist.

ward, up, back, and down (A, fig. 12). As left shoulder starts back, circle right shoulder forward, up, back, and down (B, fig. 12). Repeat.

(3) *Count.* Left–right; 2–and; 3–and; etc.

d. *Single Arm Twist* (fig. 13).

(1) *Starting position.* Erect stand, both arms extended forward at shoulder level, palms down (A, fig. 13).

(2) *Movement.* Fling left arm to side and back, keeping right arm stationary

(B, fig. 13). Head and eyes follow movement of left arm. Bring left arm forward to starting position. Repeat right (C, fig. 13). Repeat, alternating left and right arm.

(3) *Count.* Left–and–right–and; 2–and–right–and; etc.
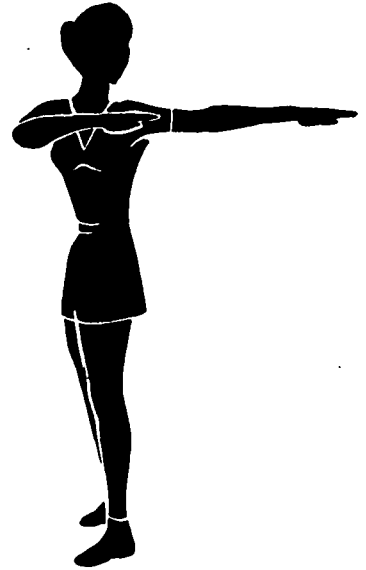

Figure 14. Twister

e. *Twister* (fig. 14).

(1) *Starting position.* Erect stand, both arms extended forward at shoulder level, palms down.

(2) *Movement.* Rotate trunk and arms as far as possible to left with vigorous twist, allowing trailing arm to bend at elbow. Head follows movement. Return to starting position and repeat right. Hips remain forward, with twisting coming from waist. Keep hips tucked. Repeat, alternating left and right.

(3) *Count.* Left–and–right–and; 2–and–right–and; etc.

f. *Cross and Fly* (fig. 15).

(1) *Starting position.* Erect stand, arms at sides.

(2) *Movement.* Fling arms sideward and upward to position diagonally above shoulders, palms upward and facing
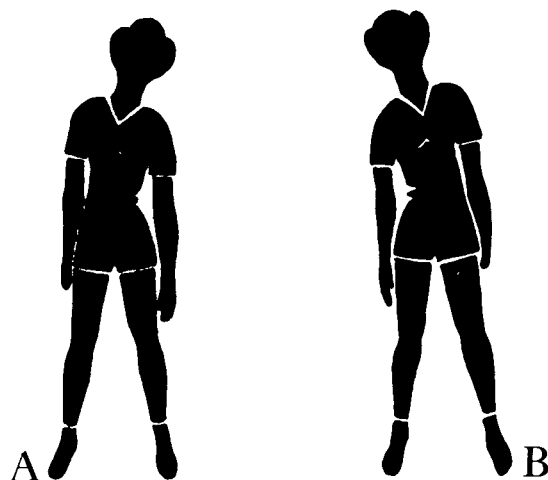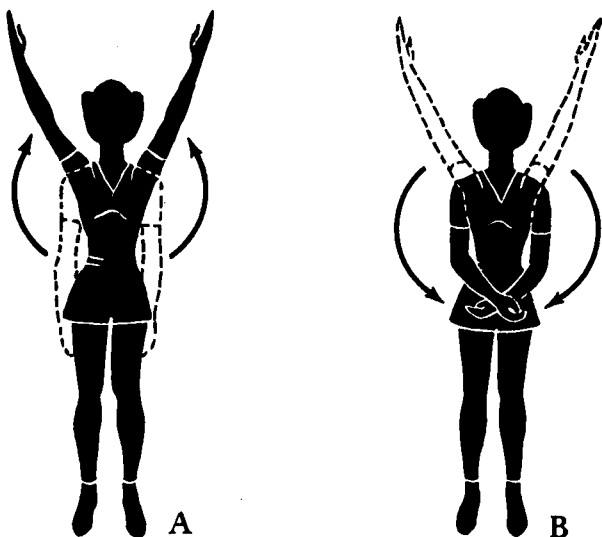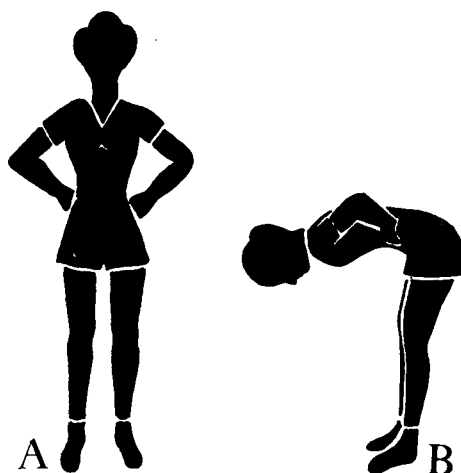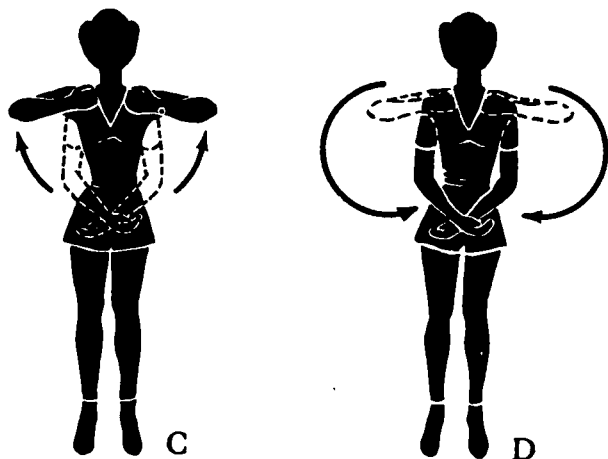
Figure 15. Cross and fly.

Figure 16. Lateral bending.

Figure 17. Body bend.

each other (A, fig. 15). Drop arms downward in relaxed manner so that elbows are close to body with fore-arms crossing low in front of body (B, fig. 15). Lift elbows to shoulder level and force back vigorously with arms bent inward, fists clenched (C, fig. 15). Relax arms and swing them low in front of body (D, fig. 15). Perform in one continuous movement. Repeat.

(3) *Count.* Fling–cross–pull–relax; 2–cross–pull–relax; etc.

28. Exercises for Abdomen and Lower Trunk
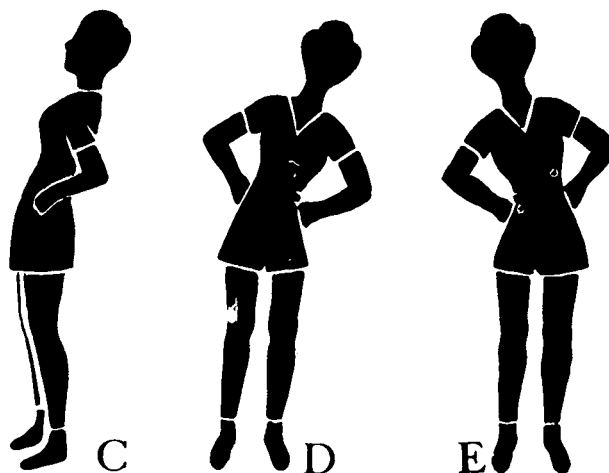
a. Lateral Bending (fig. 16).

(1) *Starting position.* Stride stand, arms at sides.

(2) *Movement.* Keeping back straight, bend sideward from waist to left (A, fig. 16). Slide left hand down leg as far as possible. Return to starting position and bend to right side, sliding right arm down leg (B, fig. 16). Repeat, alternating left and right.

(3) *Count.* Left–up–right–up; 2–up–right–up; 3–up–right–up; etc.

b. *Body Bend* (fig. 17).

(1) *Starting position.* Erect stand, hands on hips (A, fig. 17).

(2) *Movement.* Bend body forward to right angle (B, fig. 17) and return to starting position. Bend backward as far as possible (C, fig. 17) and return to starting position. Bend to left (D, fig. 17) and return to starting position. Bend to right (E, fig. 17) and return to starting position. Repeat.

(3) *Count.* Forward–up, back–up, left–up, right–up; 2–up, back–up, left–up, right–up; etc.
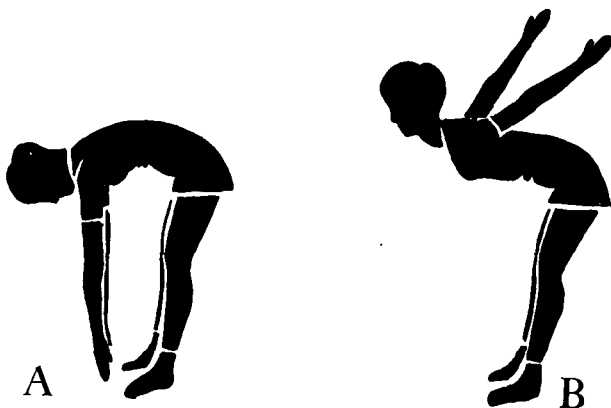

Figure 18. Bent-over back fling.

c. *Bent-over Back Fling* (fig. 18).

(1) *Starting position.* Stride stand, body bent forward at right angle, arms hanging loosely (A, fig. 18).

(2) *Movement.* Fling both arms sideward and backward vigorously, lifting head until chin is parallel with floor (B, fig. 18). Hold momentarily. Resume starting position and repeat.
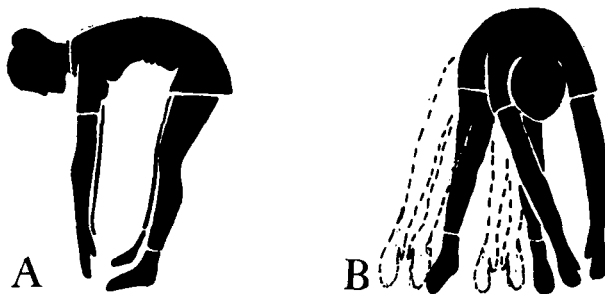

Figure 19. Bent-over bobbing.

(3) *Count.* Fling–relax; 2–relax; 3–relax; etc.

d. *Bent-over Bobbing* (fig. 19).

(1) *Starting position.* Stride stand, body bent forward at right angle, arms extended from shoulders and touching finger tips to floor, legs straight (A, fig. 19).

(2) *Movement.* Swing trunk alternately from left to right and right to left, touching by means of bobbing motion finger tips to floor at various points, as follows: on count of 1, touch floor on outer side of left foot; on count of 2, floor between feet; on count of 3, floor on outer side of right foot; on
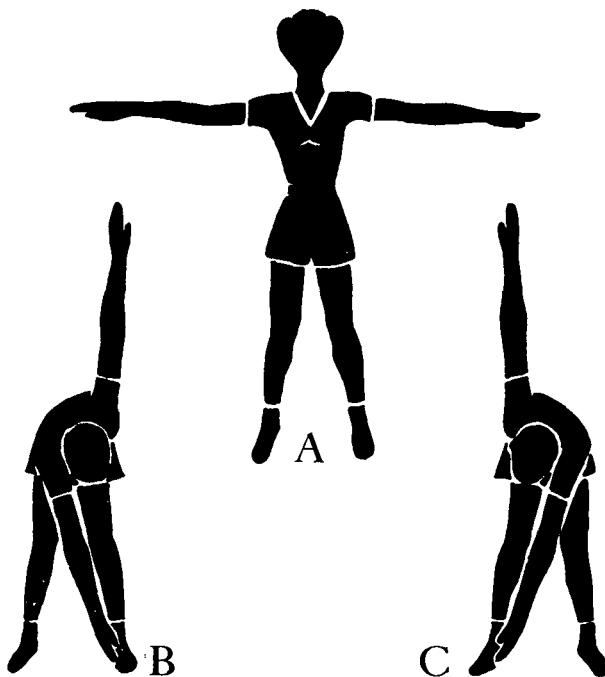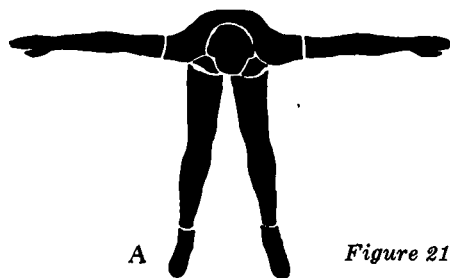

Figure 20. Criss-cross toe touch.

Figure 21. Bent-over airplane.

4, again touch floor on outer side of right foot and reverse direction of swing; on 5, touch floor between feet; on 6, floor on outer side of left foot (B, fig. 19). Repeat. Maintain throughout a smooth swinging and bobbing motion.

(3) *Count.* 1–2–3–4–5–6; 2–2–3–4–5–6; 3–2–3–4–5–6; etc.

e. *Criss-cross Toe Touch* (fig. 20).

(1) *Starting position.* Stride stand, arms extended sideward at shoulder level, palms down (A, fig. 20).

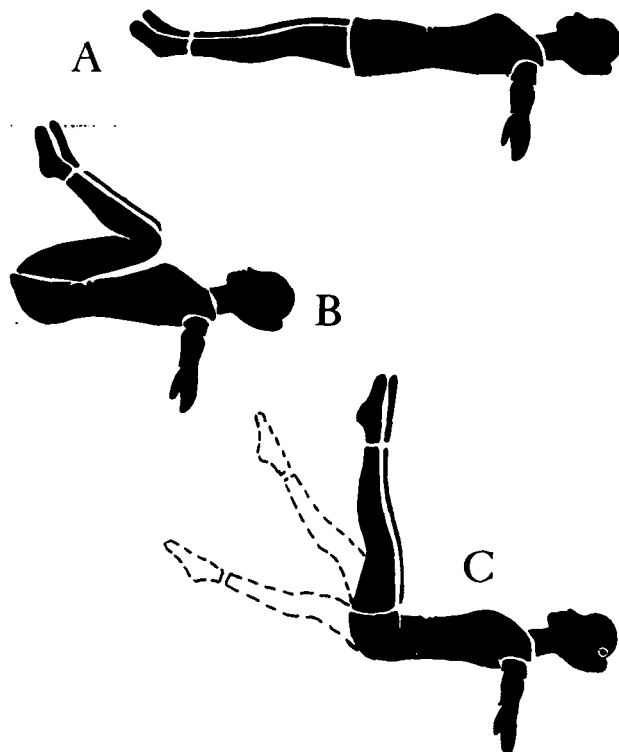(2) *Movement.* Bend trunk, touching left finger tips to right toe (B, fig. 20).

Figure 22. Single leg lowering.

Return to starting position. Bend trunk, touching right finger tips to left toe (C, fig. 20). Return to starting position. Repeat, alternating left and right. Keep legs straight.

(3) *Count.* Left–and, right–and; 2–and, right–and; 3–and, right–and; etc.

f. *Bent-over Airplane* (fig. 21).

(1) *Starting position.* Stride stand, trunk bent forward at right angle, arms extended sideward at shoulder level, palms down (A, fig. 21).

(2) *Movement.* Twist to left, touching inside of left foot with right hand (B, fig. 21). Twist to right, touching inside of right foot with left hand. Repeat, alternating left and right. Perform the two movements rapidly, twisting upper body. Free hand points to ceiling and head follows direction of free hand. Keep knees straight.

(3) *Count.* Left–right; 2–and; 3–and; etc.

g. *Single Leg Lowering* (fig. 22).

(1) *Starting position.* Back lying, arms extended sideward at shoulder level, palms down (A, fig. 22).

(2) *Movement.* On count of 1, pull both knees up to chest, toes pointed (B, fig. 22). On count of 2, extend both legs vertically (C, fig. 22). On count of 3, lower left leg slowly to floor; on count of 4, lower right leg slowly to floor. Repeat. Keep legs straight and abdominal muscles strongly contracted.

(3) *Count.* 1–2–3–4; 2–2–3–4; 3–2–3–4; etc.

h. *Double Leg Lowering* (fig. 23).

(1) *Starting position.* Back lying, arms
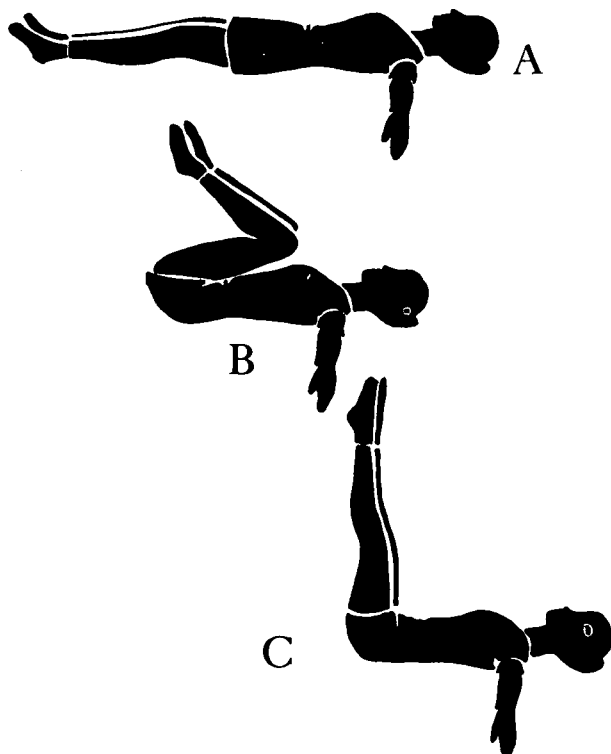
Figure 23. Double leg lowering.

Figure 24. Double leg lowering (sideways).

extended sideward at shoulder level, palms down (A, fig. 23).

(2) *Movement.* On count of 1, pull both knees up to chest (B, fig. 23). On count of 2, extend both legs vertically

(C, fig. 23). Using counts 3 through 10, lower both legs slowly to floor. Repeat. Keep legs straight and together and abdominal muscles strongly contracted.

(3) *Count.* 1–2–3–4–5–6–7–8–9–10; 2–3–4–5–6–7–8–9–10; 3–2–3–4–5–6–7–8–9–10; etc.

Figure 25. Circle-O.

i. *Double Leg Lowering* (*Sideways*) (fig. 24).

(1) *Starting position.* Back lying, legs extended vertically and together, knees straight, arms extended sideward at shoulder level, palms down (A, fig. 24).

(2) *Movement.* Keeping knees straight and legs together, roll to left side until legs touch floor (B, fig. 24). Return to starting position. Repeat right (C, fig. 24). Repeat, alternating left and right.

(3) *Count.* Left–and–right–and; 2–and–right–and; etc.

j. *Circle–O* (fig. 25).

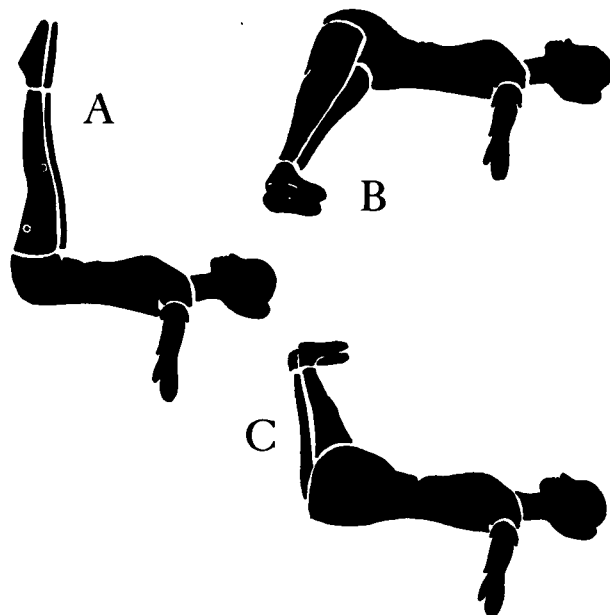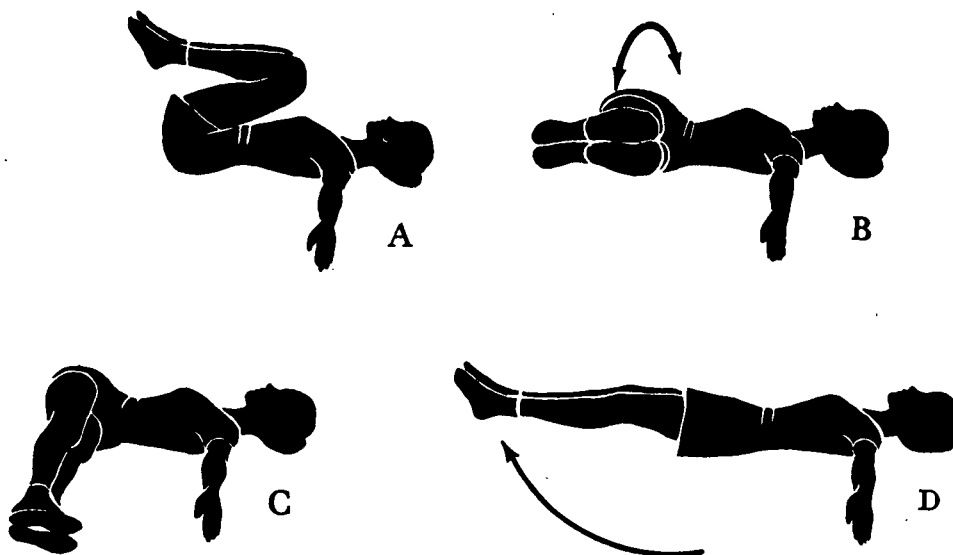(1) *Starting position.* Back lying, knees close to chest, feet together, arms extended sideward at shoulder level, palms down (A, fig. 25).

(2) *Movement.* Roll on left hip (B, fig. 25). Extend legs parallel with arms (C, fig. 25). Swing legs with circular motion to forward position, holding them no more than 6 inches from floor (D, fig. 25). Return knees to chest. Repeat right. Repeat, alternating left and right. Do not begin circular motion until legs are fully extended.

(3) *Count.* Left–extend–circle–up; right–extend–circle–up; 3–extend–circle–up; 4–extend–circle–up; etc.

k. *Abdominal Stretch* (fig. 26).

(1) *Starting position.* Front lying, legs together, toes pointed, hands clasped on small of back (A, fig. 26).

(2) *Movement.* Raise head, shoulders, and feet, keeping knees straight (B, fig.
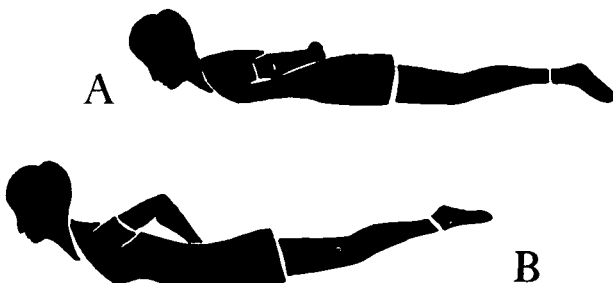
Figure 26. Abdominal stretch.

26). Stretch and hold momentarily. Relax and return to starting position. Repeat.

(3) *Count.* Up–relax; 2–relax; 3–relax; etc.
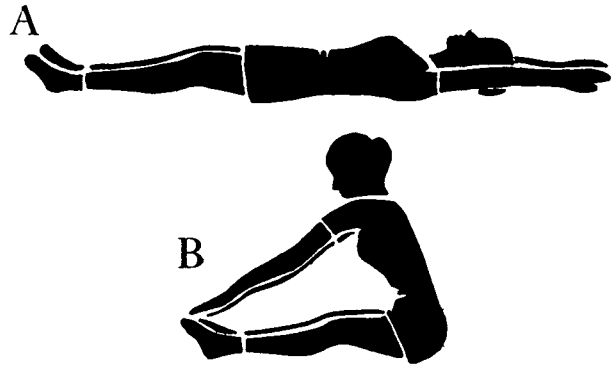
Figure 27. Abdominal contractions.

l. *Abdominal Contractions* (fig. 27).

(1) *Starting position.* Back lying, arms extended over head (A, fig. 27).

(2) *Movement.* Raise arms, head, and shoulders from floor until hands touch toes (B, fig. 27). Keep knees straight. Return to starting position and repeat.

(3) *Count.* 1–2; 2–2; 3–2; etc.
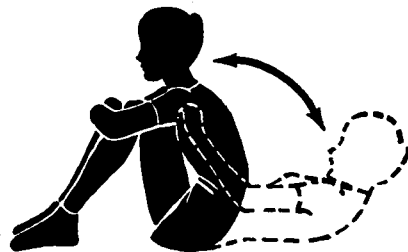
Figure 28. Sit-up.

m. *Sit-up* (fig. 28).

(1) *Starting position.* Sitting position, knees up, feet flat on floor, arms clasped around knees, back rounded.

(2) *Movement.* Release arms and, with back rounded, rock backward until only head and shoulders remain off floor. Return immediately to starting position by contracting abdominal

muscles. Repeat. Keep feet flat on floor.

(3) *Count*. Down–up; 2–up; 3–up; etc.

29. Exercises for Hips and Thighs
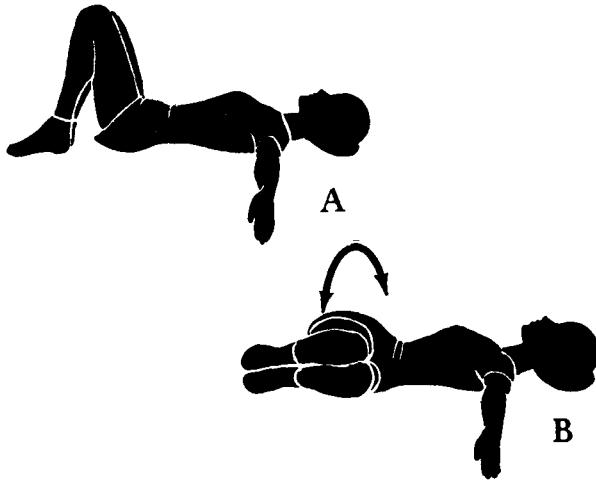
Figure 29. Hip roll, knees flexed.

a. *Hip Roll, Knees Flexed* (fig. 29).

(1) *Starting position*. Back lying, arms extended sideward at shoulder level, palms down; knees flexed, feet flat on floor, heels as close to hips as possible (A, fig. 29).

(2) *Movement*. Roll over on left hip, touching left thigh, knee, leg, and outer border of left foot to floor (B, fig. 29). Return to starting position. Repeat right. Repeat, alternating left and right. Keep knees flexed, legs together, and feet in contact with floor throughout movement. Hands, arms, and shoulders remain in place.

(3) *Count*. Left–up, right–up; 2–up, right–up; 3–up, right–up; etc.

b. *Hip Bouncing* (fig. 30).

(1) *Starting position*. Long sitting, hands behind back, palms on floor (A, fig. 30).

(2) *Movement*. Keeping head, arms, and shoulders in good alignment, lift body supporting weight on hands and heels (B, fig. 30). Twist torso to left side and bounce left hip lightly against floor 4 times (C, fig. 30). Repeat right. Repeat, alternating left and right.

(3) *Count*. Left–2–3–4, right–2–3–4; 2–2–3–4, right–2–3–4; 3–2–3–4, right–2–3–4; etc.

30. Exercises for Legs

a. *Toe Touch* (fig. 31).

(1) *Starting position*. Erect stand, hands over head, palms facing forward (A, fig. 31).
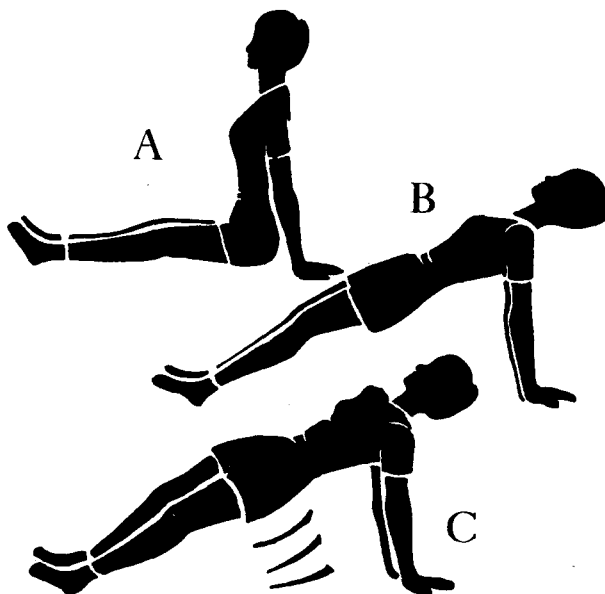
Figure 30. Hip bouncing.
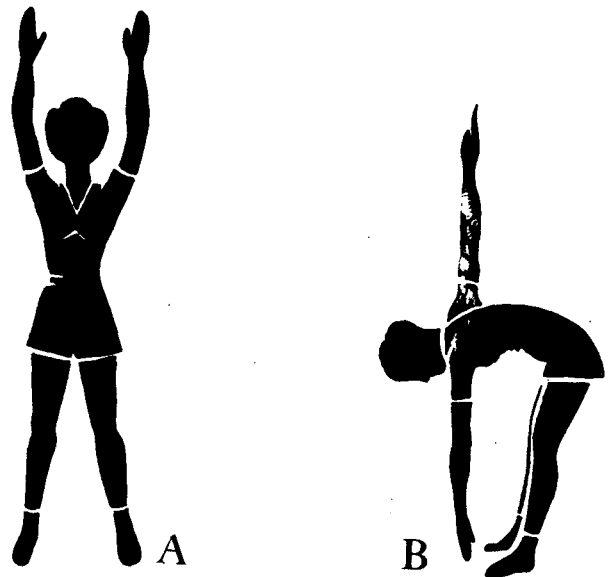
Figure 31. Toe touch.

Figure 32. Bouncing.

(2) *Movement.* Bend downward touching left hand to left toe and right hand to right toe (B, fig. 31). Return to starting position. Repeat.

(3) *Count.* 1–2; 2–2; 3–2; etc.

b. *Bouncing* (fig. 32).

(1) *Starting position.* Erect, stand, arms at sides.

(2) *Movement.* With knees slightly bent, push with toes and bounce a few inches off floor. Bounce 4 times in each direction, making quarter turn left after each 4th bounce. Repeat. To prevent dizziness, direction of turn may be reversed, as desired.

(3) *Count.* Bounce–2–3–4, 2–2–3–4, 3–2–3–4, 4–2–3–4; etc.

c. *Stride Jumping* (fig. 33).

(1) *Starting position.* Erect stand, arms at sides.

(2) *Movement.* Jump to stride stand (A, fig. 33) and back to erect stand (B, fig. 33). Jump to stride stand and on next jump make quarter turn left, landing with feet together. Repeat. To prevent dizziness, direction of turn may be reversed, as desired.

(3) *Count.* Apart–together, apart–turn; 2–together, apart–turn; 3–together, apart-turn; etc.

d. *Jumping Jack* (fig. 34).

(1) *Starting position.* Erect stand, arms at sides.

(2) *Movement.* Jump to stride stand and touch hands over head. Jump to erect stand, arms at sides. Repeat.

Figure 34. Jumping jack.

A   B

Figure 33. Stride jumping.

Figure 35. Running in place.

AGO 5414A

(3) *Count.* Apart–together; 2–together; 3–together; etc.

e. *Running in Place* (fig. 35).

    (1) *Starting position.* Erect stand, arms bent comfortably at sides.

    (2) *Movement.* Run in place, arms bent, legs lifted hip height in front, toes pointed. Maintain even speed.

    (3) *Count.* Left–right; 2–and; 3–and; etc.
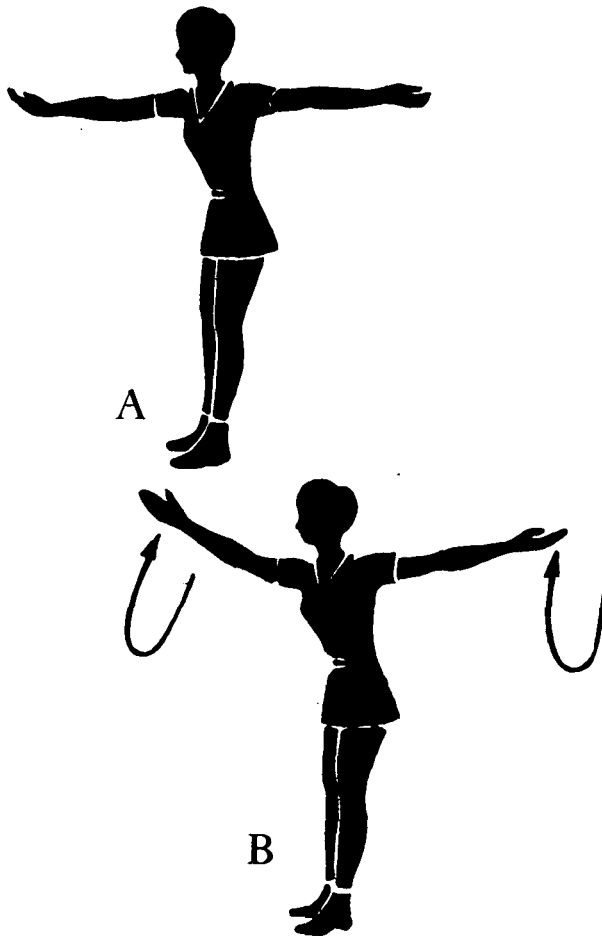
Figure 36. Arm circle.

Figure 37. Modified push-up.

31. Exercises for Arms

a. *Arm Circle* (fig. 36).

    (1) *Starting position.* Leaning slightly forward, arms extended sideward at shoulder level, palms up (A, fig. 36).

    (2) *Movement.* Make small circles approximately 12 inches in diameter, hands circling forward, upward, and backward (B, fig. 36). Repeat. Keep movement slow.

    (3) *Count.* Circle–2–3–4–5–6–7–8–9–10; 2–2–3–4–5–6–7–8–9–10; 3–2–3–4–5–6–7–8–9–10; etc.

b. *Modified Push-up* (fig. 37).

    (1) *Starting position.* On hands and knees, arms extended directly beneath shoulders to support body weight, palms down, fingers pointing forward, back level, toes on floor (A, fig. 37).

    (2) *Movement.* Bend elbows and touch chin to floor (B, fig. 37). Return to starting position. Repeat. Keep back level. Do not let it sway.

    (3) *Count.* 1–2; 2–2; 3–2; etc.

Section IV. EXERCISES FOR RELEASE OF TENSION

32. General

Tension-releasing exercises may involve a single muscle group or the entire body. Although the neck, shoulders, and lower back are generally most vulnerable, any portion of the body may fall prey to tenseness. Release of tension is accomplished by controlled relaxation.

33. Tension Release

a. *Whole Body Release.* Use the cadence series (para. 24). If variety is desired, a series

may be made by selecting any one exercise from each group of exercises for various body parts (para. 25 through 32). When exercises are used for relaxation, they should be done slowly, with concentration on relaxing between movements rather than on precise execution.

b. *Progressive Relaxation.* Lie down. Extend both arms overhead and stretch completely throughout the body. Relax the entire body, beginning with the fingers and letting the feeling of relaxation flow through the body. This exercise may be used to induce sleep.

34. Exercise for Neck Release
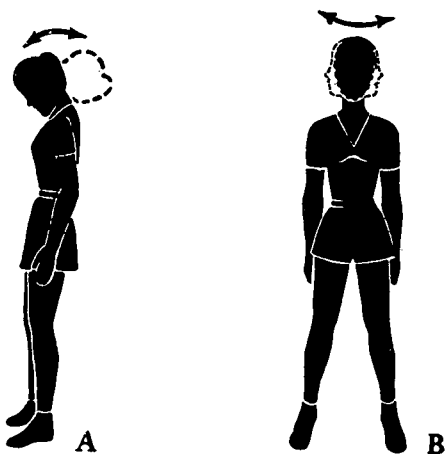
Figure 38. Head nodding and turning.

Head Nodding and Turning (fig. 38).
a. *Starting position.* Stride stand, arms at sides.

b. *Movement.* Drop head forward to chest (A, fig. 38). Lift head to normal position. Drop head backward. Return to normal position. Turn head left as far as possible (B, fig. 38). Turn head right as far as possible. Repeat sequence of movements.

c. *Count.* Forward–and–back–and–left–and–right–and; 2–and–back–and–left–and–right–and; 3–and–back–and–left–and–right–and; etc.

35. Exercise for Shoulder Release

Shoulder Lifting and Hunching (fig. 39).
a. *Starting position.* Stride stand, arms at sides.

b. *Movement.* Lift both shoulders (A, fig. 39). Relax. Repeat 4 times. Pull shoulders back as far as possible. Pull shoulders forward (B, fig.
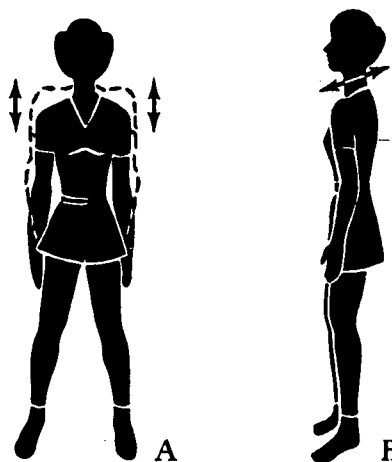
Figure 39. Shoulder lifting and hunching.

39). Repeat 4 times. Repeat entire exercise. Keep arms at sides.

c. *Count.* Up–and–2–and–3–and–4–and, back–and–forward–and, 2–and–forward–and, 3–and–forward–and, 4–and–forward–and; 2–and–2–and–3–and–4–and; back–and–forward–and, 2–and–forward–and, 3–and–forward–and; etc.

36. Exercises for Lower Back Fatigue

Figure 40. Trunk swinging forward and stretching upward.

a. *Trunk Swinging Forward and Stretching Upward* (fig. 40).
   (1) *Starting position.* Stride stand, arms at sides.
   (2) *Movement.* Bend trunk forward as far as possible. Pull head and trunk farther down with bobbing motion 4 times. Roll trunk up slowly in 4 counts, head being the last to come up to starting positions. Repeat.
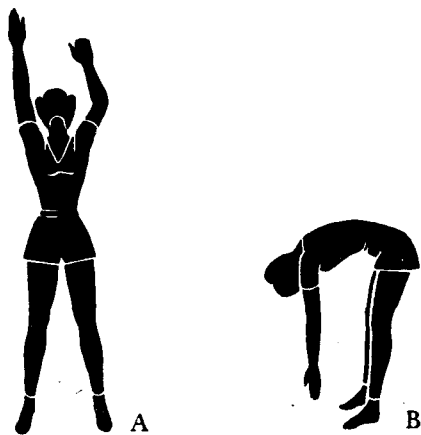
Figure 41. Alternate trunk stretching and bouncing.

(3) *Count.* Relax–2–3–4, up–2–3–4; 2–2–3–4, up–2–3–4; 3–2–3–4, up–2–3–4; etc.

b. *Alternate Trunk Stretching and Bouncing* (fig. 41).

(1) *Starting position.* Stride stand, both arms overhead.

(2) *Movement.* Stretch right arm up (A, fig. 41). Relax to starting position. Stretch left arm up. Relax to starting position. Bend trunk down (B, fig. 41). Without rising to upright position, pull head and trunk farther down in bobbing motion 4 times. Return to starting position. Repeat.

(3) *Count.* Right–and–left–and–relax–2–3–4; 2–and–left–and–relax–2–3–4; etc.

37. Exercises for Foot and Ankle Relaxation

a. *Transverse Arch Pull* (fig. 42).

(1) *Starting position.* Sitting position, hands braced behind back, knees bent,

Figure 42. Transverse arch pull.

feet flat on floor and approximately 6 inches apart, back straight.

(2) *Movement.* Pull toes under. Grip and relax 15 to 20 times.

(3) *Count.* Grip and relax.

Figure 43. Foot circling.

b. *Foot Circling* (fig. 43).

(1) *Starting position.* Sitting, hands braced behind back, knees bent, feet flat on floor.

(2) *Movement.* Extend left leg so that foot clears floor. Describe a full circle by completely extending foot downward, inward, and upward. Repeat right. Repeat 10 times with each foot.

(3) *Count.* Circle–2–3–4–5–6–7–8, right–2–3–4–5–6–7–8; 2–2–3–4–5–6–7–8; right–2–3–4–5–6–7–8; etc.

38. Exercise for Whole Body Release

Figure 44. Big X.

Big X (fig. 44).

a. Starting position. Back lying, with legs separated and arms extended diagonally overhead.

b. Movement. Stretch each limb in turn slowly and vigorously. Terminate the stretch suddenly. Relax completely for several seconds following each stretch. Repeat.

c. Count. At will.

CHAPTER 4

POSTURE TRAINING

Section I. GENERAL

39. Importance

a. Good posture is an asset to every human being. It improves appearance, increases efficiency, and contributes to general well-being. In the military service, good posture is a prerequisite for the proper wearing of the uniform. The physical training program provides an opportunity for supervised work on posture development. The habit of good posture is attained only through continual daily practice. It should be practiced in all activities, whether sitting, standing, or walking. Very few persons assume a good posture without being taught.

b. To develop the best posture either within a group or individually, the following principles should be applied to the group as a whole as well as to each member:

    (1) Create a desire for good posture;

    (2) Teach the basic elements of good standing, walking, and sitting postures;

    (3) Provide ample opportunity to practice good posture under supervision; and

    (4) Encourage the continued practice of good posture.

40. Anatomical Balance

a. Because of the wide variations in physical structure, growth, and patterns of development there is no one "best posture" for all women. There is, however, a sound standard of good posture based on anatomical balance, the keynote of good posture.

b. Good alignment of body parts is true vertical alignment in which certain body segments are in line, one above the other, so that they support each other along the pull of gravity. If the body alignment is correct, an imaginary line drawn on the profile from the top of the head through the lobe of the ear, the tip of the shoulder, the middle of the hips, slightly back of the kneecap, and in front of the outer ankle bone will be a straight line. In this position, the knees, hips, shoulders, and the head are properly balanced over the ankles (A, fig. 45). When this alignment is disturbed by a faulty position of one or more parts, the entire body is thrown out of line (B, fig. 45). The muscles must then overwork to counteract the pull of gravity, with resulting strain and fatigue to the person.

c. Viewed from the front or rear, good posture is characterized by the following: head evenly balanced between shoulders, shoulders and shoulder blades even, arms hanging equidistant from sides of body; hips even, spine a straight line from the middle of head to middle of pelvis; kneecaps pointing straight
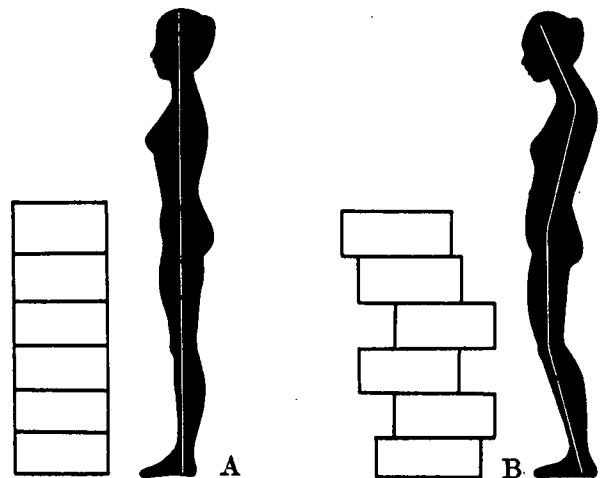

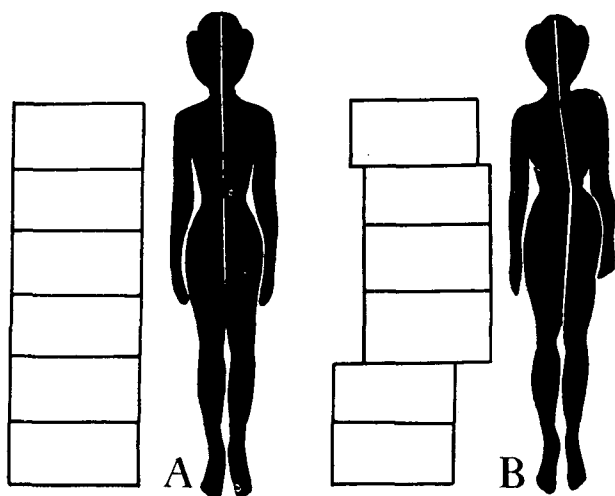*Figure 45. Anatomical balance (profile).*

Figure 46. Anatomical balance (front).

ahead; inner ankle bone in line with inner border of foot (A, fig. 46). When this alignment is disturbed by faulty position of one or more parts, the entire body is thrown out of line with resulting strain to muscles and fatigue to the person (B, fig. 46).

41. Characteristics of Good Posture

a. *Standing and Walking.* The following elements of good posture are of major importance when standing or walking:

(1) The body should be stretched upward as tall as possible. In doing this the head should not be tilted or the shoulders raised. Flattening the curve of the back and keeping the eyes level will avoid these faults.

(2) The head and neck should be centered between the shoulders. The chin should be drawn inward so that its point is in direct line over the notch at the top of the breastbone, and the neck pressed back against the collar.

(3) The shoulders should be relaxed and fall evenly. If the shoulders have a tendency to droop, they may be drawn back slightly, but this position should never be strained.

(4) The chest should be moderately elevated. If the chest is raised properly, the stomach will be flattened normally. The stomach should not be drawn in so far that normal breathing is restricted.

(5) The buttocks should be drawn down and under to flatten the lower back and prevent the pelvis from tilting forward. In the proper position, the plane of the waistline is parallel to the ground.

(6) The knees should be straight but not stiff.

(7) The weight should be evenly distributed between the heels and balls of both feet.

b. *Sitting.* Proper sitting posture has most of the same elements described for proper standing and walking posture. The following differences should be stressed:

(1) The upper back and hips should touch the back of a straight-type chair. The tendency to allow the hips to slide forward must be counteracted. The chair should be the proper height to allow the correct alignment of body parts.

(2) The upper legs should be in contact with the chair and the angle formed by the upper and lower legs should be 90°, with the feet flat on the floor.

42. Effects of Posture

A woman is often judged by her appearance. The woman with good posture inspires confidence. She comands attention. She looks like a member of the Women's Army Corps. In the eyes of her comanding officer, she is the woman for the job. She has pride in herself and her unit. A woman with poor posture often finds herself unduly fatigued after work and cannot perform the job efficiently or enjoy her recreational activities. Very often she develops a negative, discouraged attitude.

Section II. POSTURE EXERCISES

43. General

The exercises described in this section are designed for persons whose posture requires special attention. Each exercise is gauged to correct a particular postural weakness. All exercises should be done in slow cadence. An

exercise for the relief of dysmenorrhea has been included, since dysmenorrhea is sometimes caused and usually aggravated by postural weakness.

44. Exercises for Round Shoulders and Forward Head
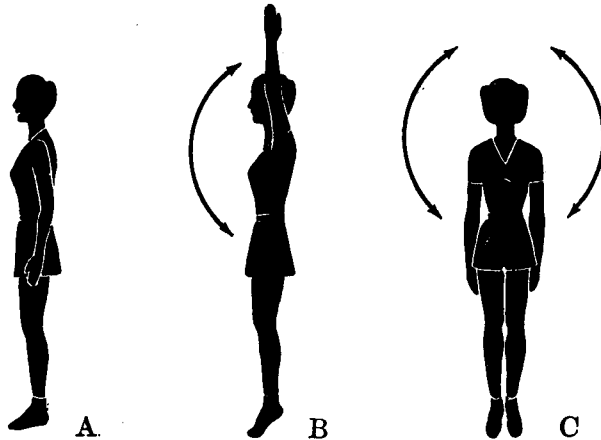
Figure 47. Body stretch.

a. *Body Stretch* (fig. 47).

(1) *Starting position.* Erect stand, arms at sides (A, fig. 47).

(2) *Movement.* Swing arms forward and upward to full stretch over head and at the same time rise high on toes (B, fig. 47). Swing arms sideward and downward slowly and press back hard. At the same time, retract chin and let heels drop to the floor (C, fig. 47). Avoid exaggerated arch in lower back.

b. *Leaning-over Back Fling* (fig. 48).

(1) *Starting position.* Trunk leaning for-
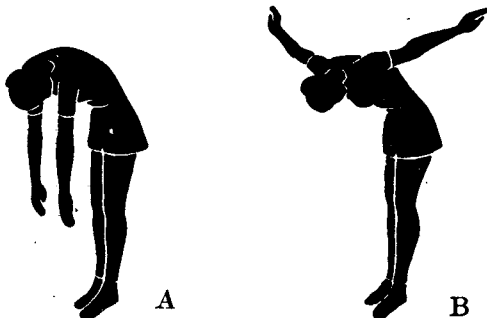
Figure 48. Leaning-over back fling.

ward about 60°, arms hanging loosely from shoulders (A, fig. 48).

(2) *Movement.* Swing arms sideward and backward vigorously, flattening upper back and retracting chin forcefully so that it is parallel to floor (B, fig. 48). Hold momentarily. Resume starting position. Repeat.
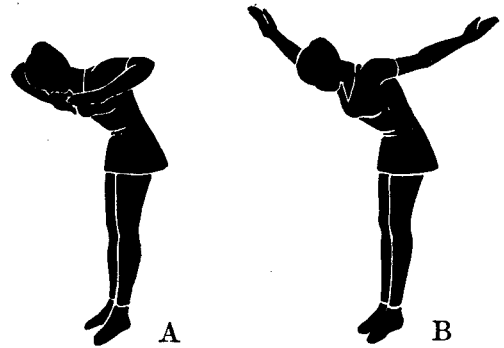
Figure 49. Winging sea gull.

c. *Winging Sea Gull* (fig. 49).

(1) *Starting position.* Bending forward about 45°, elbows horizontally sideward from shoulders, forearms bent forward, palms down, thumbs just in front of shoulders (A, fig. 49).

(2) *Movement.* Straighten elbows and swing arms slowly but hard sideward and backward. At the same time, retract head (B, fig. 49). Resume starting position. Repeat.
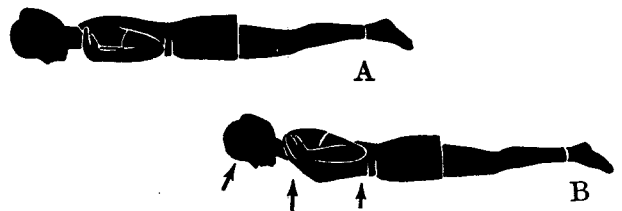
Figure 50. Front lying shoulder lift.

d. *Front Lying Shoulder Lift* (fig. 50).

(1) *Starting position.* Front lying, with elbows at sides and finger tips on shoulders (A, fig. 50).

(2) *Movement.* Rotate arms outward and pull elbows in hard at sides. At the same time, pull in chin and lift head
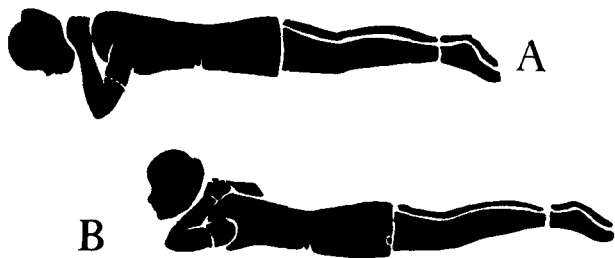
Figure 51. Head and arm lifting.

approximately 6 inches from floor (B, fig. 50). Hold a full second. Resume starting position. Repeat.

e. *Head and Arm Lifting* (fig. 51).

(1) *Starting position.* Front lying, fingers laced behind neck (A, fig. 51).

(2) *Movement.* Lift head and elbows and draw shoulder blades together (B, fig. 51). Do not lift head more than 2 or 3 inches and keep looking directly beneath nose. Relax and repeat.

45. Exercises for Sagging Abdomen and Pelvic Tilt

Figure 52. Bent-knee lying.

a. *Bent-knee Lying* (fig. 52).

(1) *Starting position.* Back lying, knees bent, feet flat on floor.

(2) *Movement.* Contract abdominal and buttock muscles slowly and forcefully, pressing lower back against floor. Relax and repeat.

Figure 53. Back lying curl.

b. *Back Lying Curl* (fig. 53).

(1) *Starting position.* Back lying, fingers laced behind head (A, fig. 53).

(2) *Movement.* Curl slowly toward sitting position until shoulders are approximately 8 inches from floor. Elbows are lifted first, followed by head and finally by shoulders (B, fig. 53). Return to starting position. Repeat.

46. Exercises for Exaggerated Spinal Curve
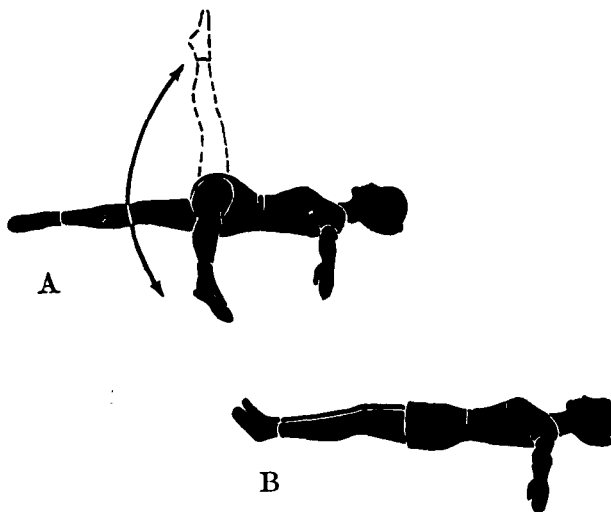
Figure 54. Spread arm, leg crossover.

a. *Spread Arm, Leg Crossover* (fig. 54).

(1) *Starting position.* Back lying, arms extended sideward at shoulder level, palms down.

(2) *Movement.* Extend right leg vertically, keeping knee straight and toes pointed. Swing right leg across body and try to touch left hand with right foot, or touch right foot to floor at waist level (A, fig. 54). Return right leg to vertical position and lower to floor (B, fig. 54). Repeat left.

b. *Long Sitting, Spine Extension* (fig. 55).

(1) *Starting position.* Long sitting, back against wall.

(2) *Movement.* Stretch tall and press entire back against wall, contracting abdomen forcefully to make lower spine touch wall. Relax and repeat.
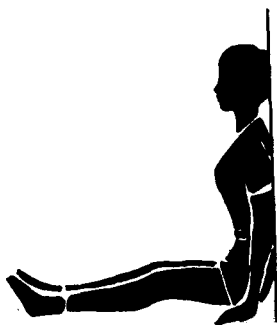
Figure 55.   Long sitting, spine extension.

47. Exercises for Developing Good Body Alignment, Grace, and Poise
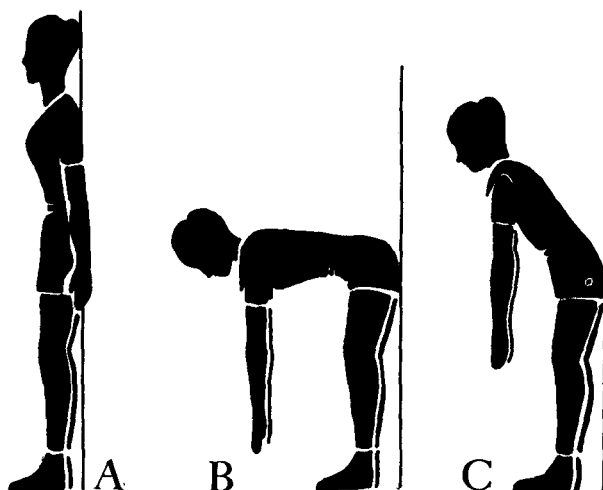
Figure 56.   Spine uncurling against wall.

a. *Spine Uncurling against Wall* (fig. 56).

(1) *Starting position.* Standing position, back against wall, feet approximately 5 inches from wall (A, fig. 56).

(2) *Movement.* Bend trunk forward from hips, letting trunk and arms hang down completely relaxed (B, fig. 56). Gradually uncurl spine against wall, attempting to touch each vertebra to wall, until spine is straight and head against wall, chin level (C, fig. 56). Lift chest slightly, but keep shoulders down. Lower back should be close to wall.

b. *Back Sliding down Wall* (fig. 57).

(1) *Starting position.* Standing position, back against wall, feet approximately

Figure 57.   Back sliding down wall.

5 inches from wall, head and entire spine pressed against wall (A, fig. 57).

(2) *Movement.* Bend knees and slide body halfway down wall (B, fig. 57). Return to starting position. Relax and repeat. Keep back flat against wall.
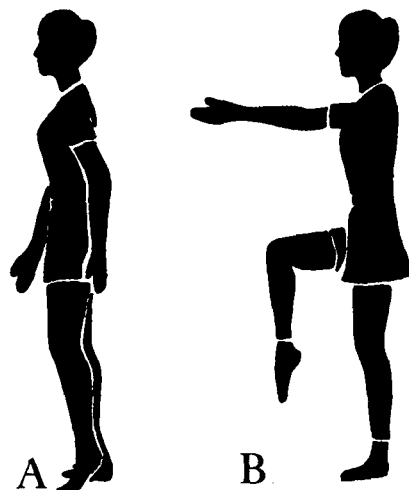
Figure 58.   Marking time.

c. *Marking Time* (fig. 58).

(1) *Starting position.* Erect stand, arms at sides.

(2) *Movement.* Swing arms alternately forward and backward and lift opposite heel, as if marking time (A, fig. 58). Repeat 4 times. On the 5th

count, raise left arm forward to shoulder level and right knee to hip level (B, fig. 58). Hold for several seconds, pushing tall through crown of head and maintaining good alignment of entire body. Relax and repeat, raising right arm and left knee on the 5th count. Repeat, alternating left and right. Work for easy, relaxed movement.
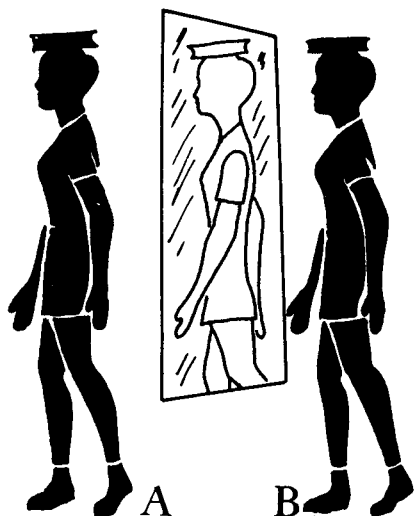
Figure 59. Walking with weight on head.
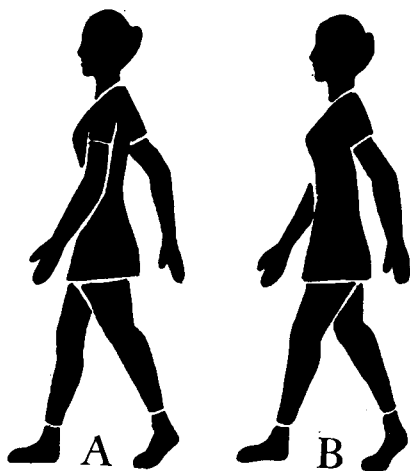
Figure 60. Scissors jump.

d. Walking with Weight on Head (fig. 59).

(1) *Starting position.* Erect stand, arms at sides.

(2) *Movement.* Balance on center of head a small sandbag, book, or ice bag, approximately 5 pounds in weight (A, fig. 59). Walk with weight on head, using mirror, if available, to check alignment (B, fig. 59).

e. Scissors Jump (fig. 60).

(1) *Starting position.* Standing position, left foot and right arm forward, right foot and left arm back (A, fig. 60).

(2) *Movement.* With a jump, change position of legs and arms, so that right foot and left arm are forward, left foot and right arm back (B, fig. 60). Repeat. Work for light landing and free-swinging movement. Keep toes pointing forward.

48. Exercise for Relief of Dysmenorrhea

Figure 61. Abdominal pumping.

a. Abdominal Pumping (fig. 61).

(1) *Starting position.* Back lying, knees bent, feet flat on floor, left hand on lower abdomen, right arm at side.

(2) *Movement.* Slowly extend abdominal muscles as far as possible, applying with left hand firm, even pressure to abdominal wall until abdomen is retracted as much as possible. Relax and repeat, keeping movement slow and continuous. Perform 10 times on individual timing.

CHAPTER 5

BODY MECHANICS

49. Definitions and Value

Correct body mechanics is the art of distributing the strain of a job over several sets of muscles instead of putting the load on a few. It is the art of using the stronger muscles in the body instead of straining the weaker. As a result, the job is done more efficiently, less energy is consumed, and injury is avoided. When the body is used correctly, it does its work efficiently and gracefully.

50. Instruction

Instruction in body mechanics should be practical. Principles underlying proper body mechanics are based on common sense and should be applied to everyday tasks. Objects familiar to Army personnel, such as footlockers and duffel bags, should be used for the practice of specific skills. Classes should be organized on a formal basis, but considerable individual assistance and supervision should be included.

51. Effective Use of Body
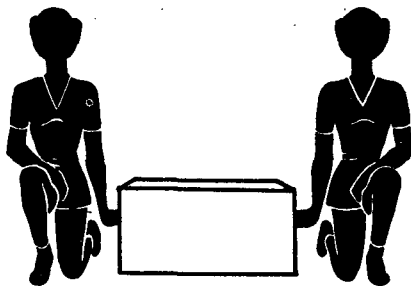
Figure 62. Lifting.

a. Lifting (fig. 62). Lift with leg rather than back muscles. To lift a heavy object, bend the knees, getting the body as close to the object as possible. Sometimes it is desirable to kneel on the knee closer to the object to be lifted. Whenever lifting large, heavy objects, such as foot-
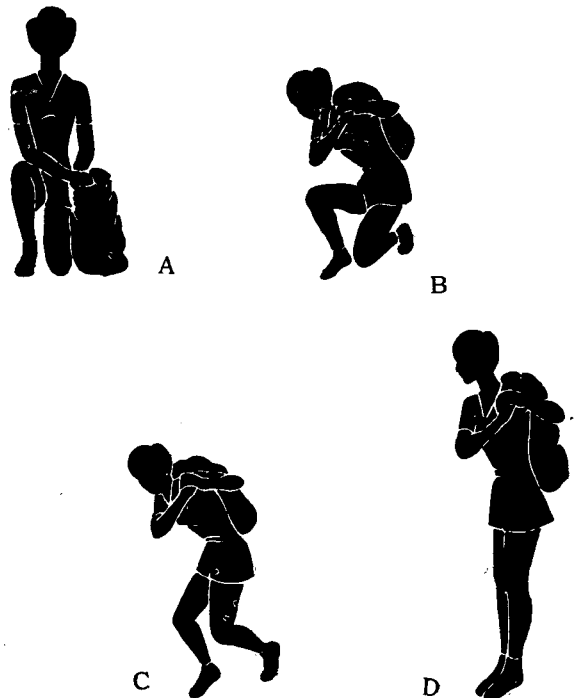
Figure 63. Carrying.

lockers, two women should work together and lift at a signal to assure that they are moving together.

b. Carrying. (fig. 63). Carry the object in a way that the weight is centered over the body.

Figure 64. Pulling.

If possible, the weight should be on the shoulders, with the back nearly straight. With objects such as duffel bags it is possible to roll the bag over the shoulder and center it on the back from a kneeling position.

c. *Pulling* (fig. 64). To pull, brace feet firmly, bend knees, round back, grasp object firmly, and let body weight do most of the pulling.

Figure 66. Jumping.

Figure 65. Pushing.

Figure 67. Falling.

d. *Pushing* (fig. 65). The whole body weight is used in pushing any heavy object. To push with the arms, face the object, lean the body from the ankles, brace the feet, and push against the floor or ground (A, fig. 65). To push with the abdomen, face the body sideways, place the shoulder against the object, brace the feet, and push against the floor or ground (B, fig. 65). To push with the back, place the back against the object, brace the feet, and push with the upper back (C, fig. 65).

e. *Jumping* (fig. 56). When jumping from a height, land on the toes, bending the knees to absorb the shock (A, fig. 56). Bend the knees
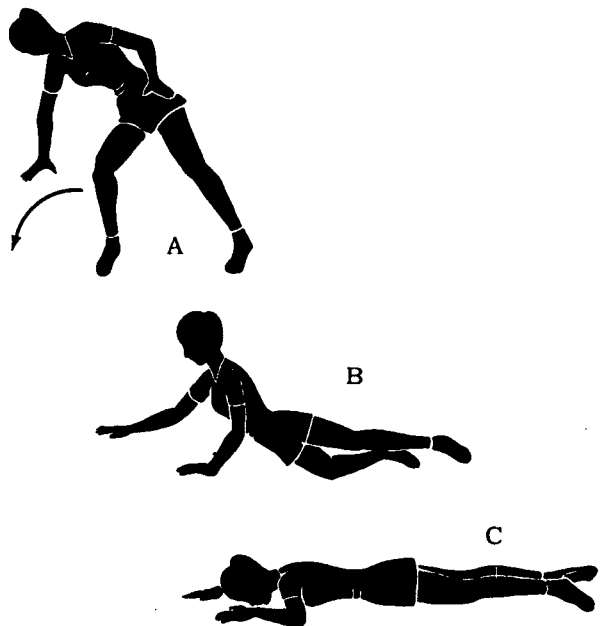
in proportion to the height from which the jump is made (B, fig. 56).

f. *Falling* (fig. 67). With the right foot placed forward and toes turned inward, fall forward (A, fig. 67), landing on the outside of the right knee and thigh to break the fall (B, fig. 67). As the body falls toward the floor or ground, break the rest of the fall with the hands (C, fig. 67). Keep the body relaxed. Distribute the impact of the fall evenly along the entire body.

Figure 68. Crawling.

g. Crawling (fig. 68). To prepare to crawl from the prone position, bend the left knee and pull it toward the body, with the inside border of the left foot against the floor or ground. Place the hands opposite the ears. The right leg remains straight (A, fig. 68). Pull the body forward by the combined action of the arms and the bent leg (B, fig. 68). Keep the body close to the floor or ground.

CHAPTER 6

GROUP GAMES

Section I. GENERAL

52. Purpose of Group Games in the Physical Training Program

Group games provide activity for large groups, require a minimum of organization and equipment, and are readily adapted to limitations of space or time. In addition, they promote good sportsmanship, cooperation, and opportunities for leadership. While they provide for competition, their flexible organization tends to keep rivalry from becoming too intense. Group games are also helpful in the development of certain skills used in individual and team sports.

53. Conducting Group Games

a. *Suggestions for Instructor*

(1) Plan games or activities so that each member of the group is assured active participation and personal enjoyment.

(2) Have all equipment ready and available before starting a game.

(3) Use as few military commands as possible to get the attention of the group.

(4) Stand where you can be seen and heard by everyone.

(5) Give rules and directions for games simply and clearly.

(6) Demonstrate whenever possible.

(7) Anticipate difficulties. It will reduce the number of questions.

(8) Be able to adapt the game to fit the situation.

(9) Conduct the game in a spirit of fun and good sportsmanship; encourage friendly rivalry.

(10) To insure fairness, be sure teams are evenly matched.

(11) Insist on fair play and enforce rules impartially.

(12) Control the group at all times. Train players to stop, look, and listen instantly upon hearing your whistle.

(13) Encourage participants to develop leadership.

(14) Stop the game before interest begins to lag.

(15) Announce the results of contests.

(16) Stress safety precautions.

b. *Technique of Presentation*

(1) Name the game.

(2) Get the women into game position.

(3) Explain briefly the objective of the game. Give only the pertinent rules.

(4) Have a demonstration at "slow speed."

(5) Answer any questions.

(6) Conduct the activity.

Section II. SELECTED GAMES

54. Basketball 21

a. *Area.* Gymnasium.

b. *Equipment.* Basketball.

c. *Rules of Game.* Players throw for goal in turn in individual competition. Each player's turn consists of two successive shots: one long, the other short. She first throws the long shot from behind the circle which ends the free-throw lane. Whether she makes the goal or not, she recovers the ball and throws the short shot from the 15-foot line.

d. Scoring. A goal from the long-shot line scores two points; from the short-shot line, one point. The player first scoring 21 points wins.

e. Variation. Two balls and two goals are used, each team lining up behind the free-throw line facing its basket. At a signal, each first player throws for her basket and, without trying to catch the ball, goes at once to the rear of her team. The next player, meanwhile, runs forward to catch the ball and, from the point where she recovers the ball, throws for goal, and in turn goes to the rear of her team, while the third player runs forward to catch the ball, etc. No run, bounce, or dribble with the ball is permitted. A scorekeeper for each team calls the score as made, adding one point for each basket. The team first scoring 21 points wins.

55. Bat Ball

a. Area. Gymnasium or softball diamond.

b. Equipment. Volleyball, soccer ball, or rubber ball; standard or post.

c. Rules of Game. Draw a serving line and a "scratch" line 10 feet in front of the serving line. Set the standard or post in the center of the play area. Divide the players into two teams. One team is at bat; the other team scatters about the area beyond the scratch line. The batter stands on the serving line, tosses the ball into the air, and bats it with her hand or fist. An underhand volley ball serve may be used. If the batter does not hit the ball over the scratch line, she gets a second trial. If the ball fails to go over the second time, the batter is out. After a successful hit, the batter runs to the post, circles it, and runs back to the serving line. The fielders field the ball and attempt to put the batter out by catching a fly ball or hitting or tagging her with the ball. A fielder cannot take more than two steps with the ball. She may pass the ball to her teammates. If the fielding team commits a foul by running with the ball, hitting the runner on the head, or in other ways designated by the local rules of the game, the runner is safe. The runner is out when—

(1) A flyball is caught.

(2) She is hit or tagged by a fielder with the ball.

(3) She does not make a complete circuit around the post.

(4) She bats out of turn.

d. Scoring. One point is scored for each home run. Three outs retire the side. Any predetermined number of innings may be played or the game may be timed.

56. Catch the Cane

a. Area. Outdoor area or gymnasium.

b. Equipment. Baseball bat or broom.

c. Rules of Game. Form the players in a compact circle not more than 15 feet in diameter and number them. Select an "It," give her a baseball bat, and place her in the middle of the circle. "It" sets the bat upright on the floor and steadies it by placing her finger on top. She calls a number and releases the bat. The player holding that number darts for the bat, attempting to catch it before it hits the floor. In the meantime, "It" takes the player's position in the circle. If the player catches the bat, she returns to her position and "It" holds the bat again. If the player fails to catch the bat, she becomes "It."

57. Center-Miss Ball

a. Area. Outdoor area or gymnasium.

b. Equipment. 2 basketballs or 2 volleyballs.

c. Rules of Game. Players form a circle with one woman in the center. One of the balls is given to the center woman and the other to a player. At a signal, the player passes her ball to the center woman. At the same time the center woman passes her ball to the woman standing to the right of the player, who in turn passes it to the center woman, and so on until the center misses. The player who makes the center miss or fumble the ball changes place with her. Passes to the center must be accurate and at chest level.

d. Variation. When skill is developed, the type of pass may be specified such as push pass, overarm pass, cross-chest pass.

58. Circle Dodge Ball

a. Area. Gymnasium or playground.

b. Equipment. Volleyball or soccer ball.

c. Rules of Game. Two teams are chosen. One team forms a circle and the opposing players scatter inside it. The circle team players throw the ball, attempting to hit the players inside the circle, who may dodge any way they choose but cannot leave the circle. If a player is hit, she is eliminated unless she has been hit by a person who, when throwing, stepped inside the circle. When all the players inside the circle have been eliminated, the teams change positions. To protect against injuries, the ball should be thrown to hit below the waist.

d. Scoring. Clock the time required to eliminate all players of each team. The winning team is the one that stayed inside the circle longer.

e. Variation. An individual winner may be determined. The winner is the woman who stays inside the circle longest. In this variation, eliminated players may join the outer circle.

59. Circle Stride Ball

a. Area. Outdoor area or gymnasium.

b. Equipment. Basketball, football, volleyball, or soccerball. The uncertain bouncing of a football adds interest.

c. Rules of Game. Players form a circle, facing center, legs at stride stand, each foot touching that of the player on either side. One player is in the center with the ball. She attempts to throw the ball between the legs of the players. Players must keep their hands on their knees until the ball leaves the center player's hands. Then they may use their hands to block it. When the ball goes between a player's legs, that player recovers the ball, returns it to the center, and takes the center player's place. Considerable feinting on the part of the player in the center is frequently necessary to maneuver the ball between the legs of the players.

60. Corner Ball

a. Area. Any fairly level area approximately 30 by 50 feet.

b. Equipment. Basketball, volleyball, soccer ball or softball.

c. Rules of Game. Divide the area by a center line into two courts of equal size and in each

corner mark a box 6 to 8 feet square. There are two teams, 8 to 15 players on each side. Each team occupies one court and sends two of its players to occupy the corner boxes within the opposite court. The remaining players are guards. The object is to throw the ball to the corner woman who attempts to catch it. Number the players and after a goal is scored, rotate the members of the scoring team, thus giving each player a chance to hold every position. The game is started by a tossup on the center line between two opposing guards. One team obtains the ball and throws it so that a corner woman may catch it. Guards move freely but may not run with the ball or hold it longer than 3 seconds. They are not permitted to step over the center or corner-box lines. When the ball goes out of bounds, the nearest guard retrieves it and throws it to one of her fellow guards who puts into play at once. Fouls are counted for—

(1) Taking more than one step while holding the ball.
(2) Holding the ball longer than 3 seconds.
(3) Stepping over center on corner-box lines.

d. Scoring. One point is scored each time a corner woman catches a flyball and each time the opposing team commits a foul. The game consists of two 10-minute periods.

61. Diamond or Box Ball

a. Area. Gymnasium, softball diamond, or any fairly level area permitting a square made by three bases and a home base.

b. Equipment. Volleyball or any bouncing ball.

c. Rules of Game. The pitcher tosses the ball so that it bounces once before coming across the plate. The batter strikes the ball with her open hand or clenched fist. The ball must strike in fair territory. If the ball strikes the outside of the diamond, the batter is out; otherwise, all softball rules apply.

d. Scoring. One point is scored for each successful run. Nine innings make a game.

62. Hit-Pin Baseball

a. Area. Gymnasium or softball diamond. The distance between bases varies with the

skill of the players. Home base is a circle 3 feet in diameter.

b. Equipment. Soccer ball or volleyball; Indian clubs.

c. Rules of Game.

(1) *General.* There are two teams, 9 to 12 players on each side, stationed as in baseball. An Indian club is set upright on each base. The object is to score runs. The kicker (batter) stands in the home circle and kicks the ball as it is rolled to her by the pitcher. When the batter has kicked a fair ball, she runs the circuit of the bases without stopping, attempting to reach home base without being put out. To put the runner out, the fielder must throw the ball to each base in sequence, endeavoring to get the ball to a base in time for the baseman to knock the club down with the ball before the runner reaches the base. When three outs are made, the sides change places.

(2) *Pitching.* The pitcher stands with both feet in the pitching box and rolls the ball with an underhand motion. Any pitched ball striking the kicker is a dead ball; it does not convert the kicker into a runner. Any pitched ball not kicked at by the kicker and not classified as a strike or dead ball counts one ball for the kicker.

(3) *Kicking.* The kicker stands within the home base circle. At the time her kicking foot touches the ball, the other foot must be within the circumference of the circle. Three strikes retire a kicker. Four balls entitle the kicker to a free kick. The ball is placed in the front half of the circle and kicked. A kicked ball is considered fair if it strikes within the baselines and foul if it strikes outside.

(4) *Strikes.* A strike is called on the kicker when—

(a) She kicks at and misses a pitched ball.

(b) She kicks a foul ball, except on the third strike.

(c) She fails to keep one foot within the circle while kicking.

(d) She does not kick a pitched ball that touches the ground in the front half of the homebase circle.

(5) *Outs.* Three outs retire a side. An out is made when—

(a) Three strikes are called on the kicker.

(b) A foul ball is kicked from a free kick.

(c) A foul ball is caught, provided it rises into the air higher than the head of the kicker.

(d) The Indian club on home base is knocked down either by the kicker or by a pitched ball.

(e) Flyball is caught.

(f) A runner is hit by her own kicked ball before it hits the ground.

(g) An Indian club is knocked down by a fair ball.

(h) A runner steps inside the baselines.

(i) A runner knocks down an Indian club.

(j) The fielding team knocks down a club on a base with the ball before the runner reaches that base.

(k) A runner interferes with a player inside the diamond.

d. Scoring. One run is scored when a runner reaches home base without being put out. One run is scored when a runner is interfered with by a fielder. The game is played in innings and any predetermined number of innings may be played.

63. Kick Ball

a. Area. Softball diamond.

b. Equipment. Soccer ball, volleyball, or rubber ball.

c. Rules of Game. Softball rules are used, with the following exceptions—

(1) Kicker stands directly behind home plate.

(2) Pitched ball must be below the kicker's knees. A ball is called if not over the plate and below the knees.

(3) A ball hitting the kicker above the knees is a dead ball. A base runner cannot advance on a dead ball.

(4) A base runner off base may be put out by being hit by a thrown ball.

64. Line Soccer

a. *Area.* Flat area approximately 30 feet square.

b. *Equipment.* Soccer ball or volleyball.

c. *Rules of Game.*

(1) *General.* There are two teams, 7 to 15 players on each side. The object is to kick the ball over the opposing team's goal line. The two teams line up on the end line goals facing each other. One or two players may be stationed on the side lines near their goal as linemen to keep the ball in bounds and guard their goal.

(2) *Plays.* The game is played in relays. The referee stands in the center of the field holding the ball. At a signal, two players, those from each team who occupy the extreme right end position, run toward the center. The referee drops the ball so that it bounces, and each of the two players attempts to kick it over the goal of the opposing team. The ball may be advanced only by kicking. Linemen may use their hands to stop it, but are not permitted to throw it. When one of the first players has scored, the two return to their lines, taking the position at the extreme left end of their teams. The lines shift to the right to make room. The ball is returned to center and, at the next signal, the two players now at the extreme right ends compete.

(3) *Fouls.* Fouls are called if—

(a) A runner touches the ball with her hands.

(b) A lineman bats or throws the ball forward with her hands.

(c) A runner pushes, holds, shoves, or blocks the opposing runner.

(d) The ball is kicked over the heads of the opposing line.

(e) The ball is kicked over a side line.

(f) A lineman or guard takes more than one step toward the center.

The penalty for a foul is a free kick from the center field. Interference from the opposing runner is not permitted.

d. *Scoring.* Two points are scored each time a runner kicks the ball over the goal of the opposing team during the play. A ball kicked over by a player other than the runner does not count, and the ball is put in play at the center with the same runners competing. One point is scored each time a successful free kick is made.

65. Long Base

a. *Area.* Playing field with a home base, pitcher's box, and one long base. Distance from home to pitcher's box is 30 feet and from the pitcher's box to long base is also 30 feet. Long base is a marked area, 3 by 6 feet.

b. *Equipment.* Softball and bat.

c. *Rules of Game.* There are two teams, 5 to 12 players on each side. The object of the game is for the batter to hit the ball and get to long base and back without being put out. Every hit is a fair hit regardless of where the ball lands. When the batter hits the ball, she must run to long base, and either remain there or return to home base. Several players may occupy the long base at one time, provided there is one player at home base. All players on long base may return to home base on a hit, running in the same sequence in which they reached the long base. Once a runner has left long base, she cannot return to it unless a fly ball is caught. A batter remains at bat until she hits the ball. After three outs, the teams change places. A runner is out when—

(1) A flyball hit by her is caught.

(2) The baseman in possession of the ball reaches long base before the runner.

(3.) The runner is tagged off base with the ball held by an opposing player.

(4) She is hit when off base by the ball thrown by an opposing player.

d. *Scoring.* A run is scored each time a base runner reaches home base safely. Any predetermined number of innings may be played.

66. Netball

a. Area. Bounded area approximately 25 by 50 feet.

b. Equipment. Volleyball, soccer ball, or basketball; net or rope; standards, poles, or trees.

c. Rules of Game. Stretch the net or rope across the center of the court at a height of 7 feet. Mark off an area 6 feet on either side of the net or rope as a neutral zone. Divide players into two teams, 8 to 20 women on a team. Each team is distributed evenly over its court. No player may enter the neutral zone. The object of the game is to throw the ball over the net into the court of the opposing team, causing it to strike the ground in the opponent's court. The opposing team tries to catch the ball before it hits the ground. Play is started by a player designated to throw the ball into the opponent's court. Any player may catch the ball but must throw it back over the net immediately or relay it to a teammate. The ball is played only by catching and throwing. A player may not walk with the ball or hold it. Play continues until a point is scored. After a score, the ball is put into play by the team scored against. The woman closest to the ball puts it back into play. Fouls are counted if—

(1) The ball goes beyond the opponent's court and is not touched by that team.

(2) The ball touches or goes under the net, or goes out of bounds. (If played indoors, a ball hitting the walls or ceiling is out of bounds.)

(3) A player holds the ball or walks with it.

(4) A player steps into the neutral zone, except to retrieve the ball.

d. Scoring. One point is scored when the ball touches the ground in the court of the opposing team or a foul is made. The game may be played to 21 points or in halves and quarters.

e. Variation. Use 6 balls, three on each side of court. Play to 50 points.

67. Poison

a. Area. Gymnasium or outdoor area.

b. Equipment. Volleyball, soccer ball, or basketball; whistle.

c. Rules of Game. Players form a circle and begin passing ball clockwise. Instructor stands outside of circle facing away from the circle. When the whistle blows, the person holding the ball has been "poisoned" and must leave the circle.

68. Snatch

a. Area. Any fairly level area approximately 30 feet wide, with a goal line at each end.

b. Equipment. Indian club or similar object.

c. Rules of Game. Any size group may play this game. Divide the group into two teams. The teams line up on the goal lines, face center, and count off. Place the Indian club in the center of the field. When the referee shouts a number, each of the two women having that number races from her goal line toward center, attempting to snatch the Indian club and carry it across either goal line without being tagged by her opponent.

d. Scoring. Two points are scored for crossing either goal line with the Indian club; one point for tagging.

e. Variations.

(1) Call more than one number at a time.

(2) Place more than one Indian club in the center.

(3) If the group is large, count off by fives or tens. In this variation several persons from each team will run to center when one number is called.

69. Sock 'Em

a. Area. Softball diamond or gymnasium. Pitcher's box is 20 to 30 feet from home base, and bases approximately 40 feet apart.

b. Equipment. Volleyball or rubber ball, 6 to 8 inches in diameter.

c. Rules of Game. The game resembles softball except that the ball is hit with the hand and outs are made by hitting the runner with the ball instead of by tagging bases of runner. Any hit ball is a fair ball. Fielders may not run with the ball. The runner may zigzag,

dodge, or stop while on the baselines, and the fielders must put her out by hitting her with direct throws from their positions. If the batter hits the ball, she must make home without stopping at bases. If she is walked, she may go only to first base, where she must stay until advanced by the next runner.

d. Scoring. Interference by a fielding player counts a score, while interference by a member of the batting team counts an out. A runner who touches all the bases and reaches home without being touched by the ball scores one run for her team. Each team is allowed three outs. Three strikes are an out, and a caught ball (fly) is an out.

70. Stoop Tag

a. Area. Gymnasium or outdoor area.

b. Equipment. None.

c. Rules of Game. One player is "It" and chases the others, trying to tag one of them. A player may escape being tagged by suddenly stooping or "squatting." Each player may stoop only three times. After the third time, the player may resort only to running to escape being tagged. Any player tagged becomes "It." One to 60 or more players may play. For large numbers of players there should be several taggers.

71. Three Deep

a. Area. Outdoor area or gymnasium.

b. Equipment. None.

c. Rules of Game. One player is selected as chaser, "It," and another as runner. The remaining players form a circle and count off by two. Each No 1 steps behind the player at her right, making a double circle. "It" chases the runner and attempts to tag her. Neither runner nor chaser is permitted to cut across the circle. The runner may become safe by stopping in front of any group of two and remaining there,

thus forming one group that is three deep. "It" can tag the rear woman of any group that is three deep. The player who finds herself at the rear of such a group runs before "It" can tag her. The one who is tagged becomes "It" at once and should tag the one who caught her, if possible. The leader should discourage long runs and encourage frequent changes. Running away from the circle should be prohibited by restricting the play zone close to the sides of the circle.

d. Variations.

    (1) The runner may cut across the circle at will, but the chaser cannot. This variation places the odds in favor of the runner and slows the game.

    (2) Both runner and chaser may cut across the circle at will. This variation provides a much faster game with more frequent changes.

72. Three-Team Dodge Ball

a. Area Gymnasium or playground.

b. Equipment. Volleyball or soccer ball

c. Rules of Game. Divide the area into three equal courts and the players into three teams. One team occupies the court at one end; and the second team, the court at the other end; the third team, the middle court. Appoint a timekeeper. The ball is given to either one of the end teams, which then works with the other end team to eliminate the members of the center team by hitting them with the ball. Any member of the center team hit by a flyball on or below her hips leaves the court. A person hit above the hips or by a ball thrown by a member of either end team who has crossed the line into the middle court is not out. When all members of the center team have been eliminated, the teams change places. When all three teams have occupied the center court, the times are compared, and the team that occupied the center court longest wins.

CHAPTER 7

RELAYS

Section I. GENERAL

73. Contributions of Relays to the Physical Training Program

a. Relays are excellent conditioning activities. They also provide stimulating competition and enjoyment for participants. The spirit of friendly rivalry injected by them into the physical training program develops team spirit and the will to win. Relays should be interspersed throughout the program to provide a change of activity.

b. Relays readily lend themselves to large groups, require little or no equipment, are easy to control, and offer a maximum of individual participation. Like group games, they are useful in developing certain skills for individual and team sports.

74. Administration of Relays

a. *Advanced Planning.* The instructor should plan for relays in advance, arranging to get the needed equipment and seeing to it that necessary lines are clearly marked on the playing area well before class time.

b. *Selection.* Relays described in this manual have been selected with a view to providing vigorous and safe exercise within the capabilities of women. In selecting relays for use in the physical training program, the instructor should consider the interests of the women, stage in training, age and physical condition, as well as the equipment and facilities available.

c. *Control.* The spirit of competition in relays is often so intense that the players have a tendency to violate the rules. It is therefore very important that the players thoroughly understand the rules of the relay and adhere to them. Officials should be competent, im-

partial, and in control of the play at all times. It is very helpful to appoint a captain for each team and make her responsible for it.

d. *Progression.* Progression in relays may be obtained by lengthening the distance to be covered in the relay, increasing the number of times the activity is performed, or introducing variations of greater difficulty. The last method also adds to the interest and enjoyment of participants.

75. Procedures for Conducting Relays

a. *Forming Teams.*
   (1) Form the groups in one file or in a circle. Have the players count off according to the number of teams desired.
   (2) Appoint a captain for each team and instruct her to form her team in relay position (file, circle, etc.).
   (3) Every effort should be made to equalize the numbers on each team by switching, if necessary, individuals from one team to another. When the teams have uneven numbers, players on the team with fewer number may run more than once or extra players may be asked to drop out and officiate. After each relay, they should join their team and let other players fall out.

b. *Starting and Turning.* Establish a common starting line for all teams. Establish another line parallel to it 40 to 60 feet away. This is the turning line. Avoid using walls as starting or turning lines. It is desirable to establish both starting and turning lines at least 6 feet away from the walls when playing indoors. To pre-

vent contestants from turning before they run the full distance, they should be required to run around a peg, pole, or assistant instructor. Judges at the starting line can keep the runners from starting too soon.

c. Method of Presenting Rules.

(1) Announce the name of the relay;

(2) Form the women in relay position;

(3) Briefly explain the relay and the rules for running it;

(4) Demonstrate;

(5) Have a definite finish line; and

(6) Answer questions.

d. Fouls. Fouls, such as starting before being touched off, not crossing the turning line, or interfering with members of another team, may be called in any relay. Some relays include special features which increase the types of fouls. Before a relay begins, the instructor should announce which errors will be considered fouls.

e. Determining the Winning Team. Determining the winning team can be facilitated by employing one or more of the following methods:

(1) Identify the last player in a relay by a handkerchief or other piece of cloth tied around her arm.

(2) Have each player sit or squat as soon as she finishes.

(3) Have all members of the team sit or squat when the last player finishes.

f. Scoring.

(1) The simplest method of scoring relays is to award 3 points to the team finishing first, 2 points to the team finishing second, and 1 point to the team finishing third. From this score is subtracted the number of fouls committed by each team during the race. The team with the highest score wins.

(2) Another method is to award 1 point to the team finishing first, 2 points to the team finishing second, etc., until each team has been awarded a score. To this score is added the number of fouls committed by each team during

the race. The team with the lowest score wins.

(3) Cumulative scores for several relays may be kept and the team with the highest (or lowest) total score declared the winner.

76. Methods of Conducting Relays

Most relays can be conducted from a number of different formations. The instructor can add interest by adapting a given relay to different methods. Three common methods of conducting relays are—

a. Lane Method.

(1) Teams of the same number of women are arranged in parallel columns 10 feet apart behind a common starting line. All teams line up and face in the same direction.

(2) A turning point is established in front of each team. The distance from the starting line to the turning point varies with each race. Each performer travels from the starting line to and around the turning point and back to the starting line, where she touches off the next one of her teammates and then goes to the end of the line. This continues until each has taken her turn.

b. Shuttle Method. Two starting lines are marked, parallel to each other and the desired distance apart. Each team counts off by two's. The odd-numbered half of each team alines itself at one starting line; the even-numbered half at the other starting line. The teams face each other across the distance to be run. The race is run by having the No. 1 woman of each team run to the opposite line and touch off the No. 2 woman of the team, who runs back and touches off the No. 3, etc. Each woman, after touching her teammate, goes to the end of the line. This continues until each woman has taken her turn, or until all have returned to their original positions. In the latter situation, all women perform twice.

c. Circle Method. This type of relay is conducted around a circular track which may be indicated by placing four objects so that they

form a rectangle of the desired size. The track is considered to be outside the objects. This type of relay may be conducted with all teams using a common starting line or with each team using a separate starting line, evenly distributed around the track. To run the race, the first player of each team travels around the track. When she returns to the starting line, she touches off the next player of her team. This continues until all the women have run.

Section II. RELAY RACES

77. Types of Relays

Relays are usually classified according to the kind of activity involved. Relays described in this manual involve running, hopping, skipping, crawling, and passing, or a combination of these. Many of the relays lend themselves to other modes of locomotion than those described. Running relays, for example, may be varied by running backward, running on all fours, and running backward on all fours, or by substituting another form of locomotion such as hopping, skipping, and moving on one hand and both feet or both hands and one foot. The instructor should select relays appropriate to the women's physical condition or to the skill she is trying to teach.

78. Running Relays

a. *All-Up Relay*

   (1) *Equipment.* Indian clubs.

   (2) *Description.* The players of each team form in single file. At the turning line and directly opposite each team, mark two tangent circles of like diameter and place 3 Indian clubs in one of the circles. At a signal, the first player of each team runs to the clubs in front of her team and, using one hand only, picks them up and sets them upright in the other circle. She then returns and touches off the second player, who in the same manner returns the clubs to the original circle. If a club falls before a runner reaches the starting line, she must return and set it up again. This continues until each woman has completed a run.

   (3) *Variations.*

      (a) Using one circle only, a runner upon reaching the clubs knocks them over with her foot and then resets them in the circle.

      (b) Using one circle only, a runner picks up one club at a time, strikes the top of it on the floor, and stands it up in the circle.

b. *Shoe Relay.*

   (1) *Equipment.* None.

   (2) *Description.* A line is drawn halfway between the starting line and the turning line. At a signal, the first player runs to the halfway line, takes off her shoes and continues to the turning line. She turns, runs back to the halfway line, puts on her shoes, and returns to the starting line, where she touches off the next player.

c. *Zigzag Relay.*

   (1) *Equipment.* 5 Indian clubs for each team.

   (2) *Description.* Directly in front of each team and near the turning line set a line of 5 Indian clubs 3 feet apart. At a signal, the first player runs forward, zigzags between the clubs, races back to the starting line, and touches the second player. Knocking over a club constitutes a foul.

   (3) *Variation.* Players zigzag between team members instead of clubs.

79. Hopping Relays

a. *Kangaroo Relay*

   (1) *Equipment.* Basketball, soccer ball, or volleyball.

   (2) *Description.* Each team forms in single file. A ball is given to the first player of each team. She places the ball between her knees and hops to the turning line and back, carrying the ball in that position. She must not use her hands to keep the ball in place. If she should drop it, she may pick it up at the point where it dropped and replace it between her knees. When she returns to the line, she touches off

the second player. The relay ends when all women have had their turn.

b. *Sore Toe Relay*

(1) *Equipment.* None.

(2) *Description.* The first player grasps one foot in both hands and hops to the turning line on the other. At the turning line, the player changes and hops back on the other foot to the starting line, where she touches off the second player.

80. Skipping Relays

a. *Rope-Skipping Relay No. 1*

(1) *Equipment.* One skipping rope approximately 8 feet long for each team.

(2) *Description.* Place rope on the turning line in front of each team. At a signal, the first player of each team runs to the turning line, picks up the rope, and skips or jumps it in any style 4 times. She then drops the rope, returns to the starting line, and touches off the second player.

(3) *Variation.* Specify the style of skipping or jumping: single jump, double jump, running in place, jumping with one leg, jumping backward, or any combination.

b. *Rope-Skipping Relay No. 2*

(1) *Equipment.* One skipping rope approximately 8 feet long for each team.

(2) *Description.* Give the first player of each team a rope. At a signal, she runs to the turning line, jumping over the rope 3 time en route. She returns in the same manner and touches off the second player by handing her the rope.

(3) *Variation.* When players are experienced at rope skipping, they may be required to jump the rope every other step.

81. Crawling Relays

a. *Goat Butting Relay.*

(1) *Equipment.* Basketball, volleyball, or soccer ball.

(2) *Description.* Each team forms in single file. A ball is placed in front of each team. At a signal, the first player drops to hands and knees and "butts" the ball toward the turning point with her head. She may run or crawl in following the ball but may not strike it with any part of her body except the head. After reaching the turning line, she butts the ball back to the second player at the starting line. This continues until each woman has had her turn.

b. *Japanese Crab Relay.*

(1) *Equipment.* None.

(2) *Description.* Players line up with their backs to the turning line. The first player takes her position with heels on the starting line and hands on the ground like a Japanese crab. At a signal, she moves in crab fashion to the turning line. She returns to the starting line in normal style and touches off the next player. This continues until each woman has had her turn.

82. Passing Relays

a. *Catch, Throw, and Sit Relay.*

(1) *Equipment.* Balls of any type.

(2) *Description.* Line the group against the walls of the gymnasium or form a hollow square facing the center. Each side of the square forms a team. Mark a circle 3 feet in diameter in front of each team and designate one player as captain. Station each captain in the circle and give her a ball. At a signal, each captain throws the ball to the player on the extreme right of her team, who catches it, throws it back, and then sits down on the floor. The captain then throws the ball to the next in line, etc., until all the players are seated. The captain must keep one foot in the circle while throwing. If any player or captain fails to catch the ball, she must recover it and return to her position before throwing.

(3) *Variation.* When the players are more skilled, the types of throw may be specified.

b. Circle Overtake Relay.

  (1) *Equipment.* Basketballs, volleyballs, or soccer balls.

  (2) *Description.* Arrange the players in a circle and have them count off by two's thus dividing the group into two teams, each team consisting of every other woman in the circle. Designate as captains two opposing players who stand directly opposite each other. Give each a ball. The balls should be differentiated by color or some other type of marking. The balls are passed by hand from player to player in the same direction, the object being to overtake the other team's ball. If a ball is dropped, the player who dropped it must get it, return to her position, and pass it on.

c. Over and Under.

  (1) *Equipment.* Basketball, volleyball, or soccer ball.

  (2) *Description.* Form each team in a file with the distance between team members just enough for each to be able to touch the woman in front of her. Mark the floor by the feet of the first and last players of each team. These two players must keep their feet on these lines. Give the first players of each team a ball. At a signal the first player passes the ball overhead to the second; the second player passes it between her legs to the third, who passes it overhead to the fourth, etc., alternating toward the rear of the line. When the last player gets the ball, she calls, "ABOUT FACE." The players turn around and the ball is relayed in the same manner until the first player again has the ball.

d. Overhead Passing Relay

  (1) *Equipment.* Basketball, volleyball, or soccer ball.

  (2) *Description.* Form each team in a file with the distance between team members just enough for each to be able to touch the woman in front of her. Mark the floor by the feet of the first and last players of each team. These two players must keep their feet on these lines. Give the first players of each team a ball. At a signal, the ball is relayed overhead toward the rear of the line. When the last player gets the ball, she calls "ABOUT FACE." The players turn around and the ball is relayed in the same manner until the first player again has the ball.

e. Pass and Squat Relay.

  (1) *Equipment.* Basketball, soccer ball, or volleyball.

  (2) *Description.* Form each team in a file with a captain about 10 feet in front of and facing her team. The captain tosses the ball to the first player in the line, who passes it back to her, and immediately squats. The captain then tosses the ball to the second player, etc. If any player misses the ball, she must recover it, return to her position, and pass it to the captain before squatting.

83. Miscellaneous Relays

a. Bowling Relay.

  (1) *Equipment.* 3 Indian clubs and a basketball, volleyball, or soccer ball.

  (2) *Description.* Place 3 Indian clubs in a row, one foot apart on a turning line approximately 40 feet in front of each team's starting line. Give the first player of each team a ball. She rolls the ball toward the clubs, attempting to knock them down. She then runs forward, gets the ball, and carries it back to the second player, who has moved up to the starting line. The game continues until one team has knocked down all its clubs. The first team to bowl down its clubs scores one point. All clubs are then set up and the contest starts again, with the next player in order bowling first.

b. Foot-Dribble Relay.

  (1) *Equipment.* Soccer balls or volleyballs.

  (2) *Description.* Place a soccer ball or volleyball in front of the first player

of each team. At a signal, the first player dribbles the ball with her feet across the turning line and back to the starting line. On her return to the starting line, each player must maneuver the ball directly in front of the next player so that she can kick it without moving from her starting position. The ball must be kept on the floor and be kicked by using the sides of the feet.

c. *Medley Relay.*

    (1) *Equipment.* None.

    (2) *Description.* Number the players and instruct each how she is to move when her turn comes. Various methods of locomotion are assigned. No. 1's may be instructed to hop on one foot to the turning line and to run back; No. 2's to go on all fours, etc. Any method or combination of methods of locomotion may be used.

CHAPTER 8

SPORTS

Section I. GENERAL

84. Purpose and Value

Sports are an important part of the physical training program. They are valuable as body conditioners, supplementing the more formal exercises. Because of their popularity and natural appeal, they are an effective means of developing and maintaining interest and cooperation. Sports have a strong carryover value. The competition provides a laboratory where initiative, persistence, teamwork, confidence, and the ability to think and act quickly and effectively under pressure are practiced and developed. Sports lift morale by providing tension-relieving, wholesome activity. Athletic teams exert a strong unifying influence on a unit, develop *esprit de corps*, and afford spectators as well as players diversion from

regular duties and an opportunity for self-expression. Unit commanders should be familiar with the sports activities available; increase their variety, whenever possible; and guide individuals in the selection of appropriate activities.

85. Choice of Athletic Activities

In selecting athletic activities, the following factors should be considered:

a. Suitability for women;

b. Popularity of the sport;

c. Knowledge of the sport;

d. Availability of equipment; and

e. Availability of coaches and officials.

Section II. TEAM SPORTS

86. Basketball

a. Area. Court, indoors or outdoors, 94 feet long and 50 feet wide, marked for basketball and with a center dividing line. At each end of the court a basket should be affixed 10 feet above the floor. Indoor courts should have a clearance of at least 22 feet.

b. Equipment. Basketball.

c. Description. Basketball for girls and women is played by two teams of 6 players each. Half of the court is the front court of one team and back court of the other. Any four players of a team may be in their front or back court at one time. The ball is passed, thrown, batted, bounced, handed, or rolled from one player to another. The purpose of each team is to get the ball into its own basket and

prevent the other team from securing possession of the ball and scoring. A goal from the field counts 2 points, from the free-throw circle 1 point. The game consists of 8-minute quarters, with 2-minute intermissions between quarters, and a 10-minute intermission between halves.

87. Field Hockey

a. Area. Field 90 to 100 yards long and 50 to 60 yards wide, marked out for hockey and containing at each end of goal consisting of two posts 4 yards apart joined by a horizontal crossbar 7 feet from the ground.

b. Equipment. Hockey stick for each player, hockey ball, shin guards for each player, goal pads and foot protectors for goalkeeper.

c. Description. Hockey is played by two teams of 11 players each: five forwards, three halfbacks, two backs, and a goalkeeper. The object is for one team to hit the ball past the opposing defending players and over the goal line between the goalposts and under the crossbar. Each goal counts one point. Playing time is a maximum of 60 minutes, minimum of 30.

88. Lacrosse

a. Area. Field 90 to 100 yards long and at least 50 yards wide. There are no definite boundaries, but natural boundaries such as grandstands, trees, or shrubs are agreed upon before the game. At each end is a goal, consisting of two posts 6 feet apart joined by a crossbar 6 feet from the ground.

b. Equipment. A *crosse* for each player (wooden stick turned at end with leather thongs affixed to form a cradle) ; and a lacrosse ball (rubber sponge ball 8 inches in circumference). Goal keepers wear leg pads, chest protector, and face mask.

c. Description. Lacrosse is played by two teams of 12 players each: 5 attacking, 6 defending, and a center who plays both attack and defense. The object of the game is to get the ball down the field and into the goal by means of quick, short passes from one player's cradle to another. Each goal counts one point. Official playing time is two periods of 30 minutes each, but this time may be shortened by mutual agreement of team captains.

89. Soccer

a. Area. Field 80 to 100 yards long and 40 to 60 yards wide, marked out for soccer and containing at each end a goal consisting of two goal posts 6 yards apart joined by a horizontal crossbar 8 feet from the ground.

b. Equipment. Soccer ball and shin guards for each player. Leather shoes are permitted but metal plates or projecting heavy soles are not allowed.

c. Description. Soccer is played by two teams of 11 players each: 5 forwards, 3 halfbacks, 2 fullbacks, and a goalkeeper. At the beginning each team lines up in its own half of the field.

The game starts by means of the kick-off awarded to one team. The object of the game is for each team to advance the ball legally down the opposing team's half of the field in order to score a goal by sending it between the opponent's goalposts and under the crossbar. Each field goal counts 2 points; each penalty goal 1 point. The game consists of 4 quarters of 8 minutes each, with a 2-minute rest between quarters and a 10-minute interval between halves. Periods may be shortened by mutual consent of team captains.

90. Softball

a. Area. Softball diamond with 60-foot baselines and a pitching distance of 38 feet.

b. Equipment. Softball, softball bat, home plate, pitcher's plate, bases. Gloves may be worn by any player, but mitts may be used only by the catcher and first baseman. Catchers must wear mask and body protector.

c. Description. Softball is played by two teams of 9 players each: pitcher, catcher, first baseman, second baseman, third baseman, shortstop, left fielder, center fielder, and right fielder. Players may be stationed anywhere on fair ground. The pitcher, when delivering the ball to the batter, must be in legal pitching position and the catcher must be in her box. Regulations for softball do not vary greatly from baseball and, like baseball, the object of the game is to score runs. When a runner has returned to home plate after making a circuit of the bases without being put out, her team is given one point. The winner of the game is the team that scores the most runs in 7 innings, the regulation game for softball.

91. Speedball

a. Area. Field 100 yards long and 60 yards wide marked for speedball and with goal line at each end. Goalposts are set on the goal line equidistant from side lines and six yards apart. The posts are 20 feet in height and are joined by a crossbar 8 feet from the ground.

b. Equipment. Soccer ball, shin guards for players. Leather shoes may be worn but metal plates or projecting heavy soles are not allowed.

c. Description. Speedball is played by two teams of 11 players each: 5 forwards, 3 halfbacks, 2 fullbacks, and a goalkeeper. Each team lines up in its half at the beginning of the game. The ball is put in play by a kick-off from the center. If the ball is raised into the air from a direct kick, it becomes an aerial ball and may be advanced by throwing, juggling, volleying, blocking, heading, or kicking. If the ball is rolling, bouncing, or stationary on the ground, it is a ground ball and must be advanced by kicking, dribbling, volleying, blocking, or heading. The object of the game is for one team to advance the ball up the field and over the goal line. A score is made by a field goal (2 points); dropkick (3 points); penalty kick (1 point); or touchdown (2 points). The game consists of 4 quarters of 8 minutes each, with a two-minute rest between quarters and a 10-minute interval between halves. Periods may be shortened by mutual consent of captains.

92. Volleyball

a. Area. Court, indoors or outdoors, 60 feet long and 30 feet wide. Indoor courts should have a clearance of 20 feet above the floor.

b. Equipment. Volleyball; net 3 feet wide and 32 feet long, stretched across the center of the court at the height of 7 feet, 4¼ inches.

c. Description. Volleyball is a netball game played by two teams. In all official matches, the teams are composed of 6 players each. Unofficial games may be played with from 6 to 20 players on a team. The object of the game is to hit the ball over the net in such a way that the opposing team cannot return it. Failure of the receiving team to return the ball legally over the net into the opponents' court scores one point for the team serving. The game is completed when one team scores a total of 15 points or when 8 minutes of actual playing time have elapsed. The winning team must have a 2 point advantage. If a team is not 2 points ahead when 15 points have been scored, or after 8 minutes of actual playing time, play continues until one team is 2 points ahead. Winning two games out of three constitutes a match.

Section III. INDIVIDUAL SPORTS

93. Archery

a. Area. Outdoor or indoor range.

b. Equipment. Standard size (48 inches) target divided into central disc and 4 concentric rings painted respectively, from within out, gold, red, light blue, black, white. Any type of bow except a crossbow; any type of arrows.

c. Description. Archery is the art, practice, or skill of shooting with bow and arrows. An archer stands with one foot on each side of the shooting line and releases the arrow from the bow. Scoring is determined by the ring of the target hit by the arrow. The center of gold scores 9 points for each hit; red scores 7 points; blue 5; black 3; and white 1.

94. Badminton

a. Area. Court, 44 feet long and 20 feet wide.

b. Equipment. Badminton racket; shuttlecock; net across the center of the court, the top of the net being 15 feet high.

c. Description. Badminton may be played singles or doubles. The object of the game is to score points by hitting the shuttlecock across the net in such a way that the opponent or opponents cannot return it. For women, singles is won by the first player to score 11 points. Doubles is won by the team getting 15 or 21 points. Scoring is similar to tennis.

95. Billiards

a. Area. Indoor area.

b. Equipment. Billiard table, cues, billiard balls.

c. Description. The object of the game is to stroke the cue ball so that it successively hits 2 other balls scoring a carom or billiard, which counts 1 point. There are several varieties of billiards. The most common variety in the United States is played with 15 object balls on a table with pockets. This game is called "pocket billiards" or "pool." In pool, the object is to stroke the cue ball so that it hits other

balls into the pockets. Both games are played for a specified number of points predetermined by the players.

96. Bowling

a. Area. Bowling alley.

b. Equipment. Bowling lane, ten pins, bowling ball. All equipment can be rented at a bowling alley.

c. Description. The object of the game is to knock down the ten pins by means of a bowling ball rolled or delivered by the bowler down the bowling lane. A game consists of 10 frames. Each player bowls 2 balls in each of the first 9 frames, except where she makes a strike (knocking down all pins on the first ball). A player who bowls down all 10 pins with a second ball scores a spare. A player who scores a strike or spare in the tenth frame delivers three balls. A perfect score is 300 points. A strike counts 10 pins plus the total pinfall on the next two balls. A spare counts 10 points plus the pinfall on the next ball. Each pin in a pinfall counts one.

97. Croquet

a. Area. Area 60 feet long and 30 feet wide, usually outdoors.

b. Equipment. Croquet set (arches, mallets, balls).

c. Description. The object of the game is to knock the ball from the stake at one end of the field, through designated arches, to the stake at the other end of the field, and back through designated arches to the beginning stake. Players take turns hitting their ball. The player arriving at home stake first is the winner.

98. Cycling

a. Area. Outdoors.

b. Equipment. Bicycle.

c. Description. Cycling is an individual sport but much additional pleasure can be obtained by formation of cycling club or groups for day or longer excursions and trips. Many public recreational areas provide opportunities for cycling.

99. Fencing

a. Area. Fencing mat in gymnasium or other area.

b. Equipment. Fencing mat, 40 feet long and 6 feet wide; foil, wire-mesh mask, glove for weapon hand, fencing uniform.

c. Description. Fencing, a sport with a highly romantic history, is the art of personal offense and defense by the sword. It places great emphasis on form and requires skill, alertness, and fast foot work. Women use as a weapon only the foil, a sword with a flexible, rectangular blade with blunt point and bellguard. All fencing takes place in the fencing area. The object is to touch the opponent with the weapon and at the same time prevent the opponent from scoring a touch. Rules provide that touches, to be valid, must be made with the point on target. Target for women extends from the top of the neck to the lines of the groin in front and to a horizontal line across the top of the hip bones on the back and sides, excluding the arms up to the shoulders. The contestant scoring 4 valid touches is declared the winner.

100. Golf

a. Area. Golf course of 9 or 18 holes. Each hole consists of a tee from which play is begun; a fairway or area from 100 to 600 yards; and a putting green in which is a cup or hole.

b. Equipment. Golf balls, golf clubs.

c. Description. The object is to hit the ball from the teeing area to the green and into the cup with the fewest possible strokes. The score for the game is the total number of strokes for all holes. Golf is often played by four people, called a foursome, but it can be played alone or as doubles.

101. Gymnastics

a. Area. Gymnasium.

b. Equipment. Apparatus (balance beam, vaulting (horse, buck, or Swedish box), rings, uneven parallel bars, trampoline).

c. Description. Gymnastics is both a science and an art. It is a science because it is concerned with the anatomy of movement; it is an art because it is concerned with aesthetic con-

cepts as well as physical skills. It includes calisthenics, gymnastics on apparatus, acrobatics, tumbling, and tumbling on trampoline. Suitable equipment is necessary for any program of gymnastics, and it is important that the various pieces of apparatus meet official specifications. Gymnastics should be undertaken only if professional coaches or instructors are available, since severe injury may result from amateur efforts.

102. Handball

a. Area. Court, 34 feet long and 20 feet wide, with one wall 16 feet high; or four walls, each 16 feet high.

b. Equipment. Small, hard rubber handball. Gloves may be worn if desired.

c. Description. Handball is a vigorous game played by two, three, or four players. The object of the game is to serve or return the ball so that the opponent fails to make a legal return. Play is started by a service consisting of dropping the ball to the floor and hitting it on the bounce with one hand so that it strikes the front wall and rebounds. The object is for players to return the ball to the front wall. In one-wall handball, the ball is returned directly to the front wall; in four-wall handball it may hit the rear wall, side walls, or ceiling or any combination of these before returning to the front wall so long as it hits the front wall before hitting the floor. If successfully returned, the ball is kept in play until one of the players fails to make a legal return. If the ball is not returned or if a foul is committed by the receiver, the server receives a point. If the server commits a foul, she loses the serve. The game consists of 21 points.

103. Hiking

a. Area. Outdoors.

b. Equipment. None or as desired.

c. Description. Hiking can vary from a day hike to an extended hiking trip and equipment ranges from none to elaborate paraphernalia including sleeping bags, tents, and other camping equipment. Most recreational areas provide trails, trips, and overnight hostels.

104. Horseshoe or Quoit Pitching

a. Area. Indoor or outdoor area, 30 to 40 feet long and 6 feet wide, containing a metal stake at each end.

b. Equipment. Horseshoes or quoits; two metal stakes one inch in diameter.

c. Description. Horseshoes or quoits is played by two persons or by teams of two. The object is to pitch the horseshoe (quoit) so that it encircles the stake or falls close to it. Usually each player tosses 2 shoes (quoits) consecutively. A ringer counts 3 points, double ringer 6, and 1 point is given for each shoe closest to the stake. Shoes that lean on the stake also count 1 point. In tournament play, only shoes within 6 inches of the stake score, but this rule may be disregarded in friendly matches. A game of 21 or 50 points is common, with a tournament match 6 of 11 games.

105. Ice Skating

a. Area. Ice skating rink (indoor or outdoor) or other frozen body of water.

b. Equipment. Ice skates.

c. Description. The modern skate has steel blades and is usually fixed permanently to a shoe. The blade is shaped according to the type of skating to be done: rounded for figure skating; pointed for speed skating. Indoor rinks have made this sport a year-round activity.

106. Riding

a. Area. Outdoors or indoor ring.

b. Equipment. Horse, saddle, bridle, etc.

c. Description. Riding involves learning how to mount, control the movement of, and dismount from a horse. Horseshows, hunts, and equestrian skills such as jumping are areas of interest to the accomplished horsewoman.

107. Riflery or Pistol Shooting

a. Area. Indoor or outdoor range.

b. Equipment. Target; rifle or other firearm; ammunition.

c. Description. Various types of firearms may be used, with particular rules for each. Infor-

mation on ranges, firearms, and other equipment should be obtained from the National Rifle Association (NRA), which governs the official rules for this sport. Shooting is a safe sport when rules for safety are thoroughly understood and strictly obeyed, but participants should receive the most careful training and supervision.

108. Roller Skating

a. Area. Indoor or outdoor rink or other smooth surfaced area.

b. Equipment. Roller skates.

c. Description. Roller skating is excellent exercise on indoor or outdoor rinks and has become a popular sport.

109. Shuffleboard

a. Area. Concrete or terrazzo surface court, 52 feet long and 6 feet wide, a triangular portion of each end marked off into scoring areas.

b. Equipment. Eight shuffleboard discs (4 red, 4 black) ; cues or sticks.

c. Description. Shuffleboard may be played by two persons or two teams of two. The object is to push one's own disc onto scoring areas at the opposite end of the court and to knock a rival disc out of a scoring position and replace it with one's own. After the eight discs have been shot, the score is counted. Each disc on the scoring area but not touching the line scores as marked on that area. Discs touching a line or outside the scoring area do not count.

110. Skiing

a. Area. Outdoors, snow covered area.

b. Equipment. Skis, ski poles, ski boots.

c. Description. In recent years many magnificent skiing areas have been opened. Skiing is a challenging sport, requiring from the expert the utmost in precision, coordination, strength, stamina, and agility. Events for women include the slalom and giant slalom (a race in which contestants follow a course determined by pairs of flags) and down hill racing.

111. Table Tennis

a. Area. Indoor or outdoor area.

b. Equipment. Table 9 feet long and 5 feet wide; celluloid ball; rubber or sandpaper-covered rackets; 6-inch net stretched across center of table.

c. Description. Table tennis, also known as ping pong, is played in singles or doubles as in tennis. The object is to hit the ball so that it flies across the net and bounces on the opponent's side of the net in such a way that it cannot be returned by the opponent. Players continue to hit the ball back and forth until one knocks the ball into the net or off the table, or misses hitting it before it takes a second bounce. When one of these errors occurs, the opponent wins a point. The player scoring 21 points first wins, unless the score is 20–20, at which time, one player must get 2 more points than her opponent in order to win.

112. Tennis

a. Area. Court, 78 feet long and 36 feet wide, indoors or outdoors, marked for tennis.

b. Equipment. Tennis ball; tennis rackets; net three feet high stretched across the court, touching the ground along its entire length and flush to the posts.

c. Description. Tennis is a netball game played between two individuals (singles) or between teams of two (doubles). The object of the game is to hit the ball with the racket over the net into the opposite court in such a way that the opponent cannot return it. Rules and the method of scoring should be obtained from the current official rules for this sport.

113. Track and Field Events

Track and field events for women consist of dashes, shuttle and pursuit relays, and hurdles. Field events include the shot put; discus throw; javelin throw; basketball, soccer ball, baseball and softball throws; running broad jump; standing broad jump; and running high jump. The women's pentathlon is a combination of five events—220 meter run, shot put, high jump, hurdles, and broad jump. From the standpoint of physical fitness, track and field out-

rank many sports. In no other sport are fundamental body actions of running, jumping, and throwing so completely analyzed and learned for great output of effort. When such skills are thoroughly learned, they have great carryover value into other sports. Another advantage is the minimum amount of equipment necessary and the maximum possibility for participation by all women.

114. Water Sports

Water sports include boating, fishing, swimming, diving, water skiing, and many other sports carried on either in or on the water. In all of these activities, proper precautions for safety should be observed and local laws or regulations obeyed. Details on swimming instruction in the physical training program are found in chapter 9.

Section IV. TOURNAMENTS

115. Value

Tournaments add interest and motivation to the physical training program. They help to determine the skill level of teams or individuals. Incorporated into a sportsday or playday, a tournament provides a fitting highlight.

116. Types of Tournaments

The type of tournament used is determined by the time available, number of teams participating, and the kind of activity. AR 28–52, as changed, outlines the Army Sports Program. The various methods of organizing athletic competition can be found in TM 21–225.

a. *Single Round Robin.* If 8 or fewer teams are participating, the round robin schedule is best. In the single round robin each team plays every other team and the winning team is determined on a percentage basis (the number of games won as against the games played). Figure 69 shows the method of determining the playing schedule for a round robin tournament. The number indicates the round in which two teams meet; for example, team C meets, in turn, G, A, B, H, D, E, and F. "Bye" indicates that no game is played and that the team given a "bye" is awarded a nominal win.

b. *Double Round Robin.* If it is desired that every team play every other team twice, the double round robin schedule is used. The method of setting up the double round robin is the same as for the single round robin, but the process is repeated for a second cycle.

8 TEAMS

	A	B	C	D	E	F	G	H
A	1	2	3	4	5	6	7	
B		3	4	5	6	7	2	
C			5	6	7	1	4	
D				7	1	2	6	
E					2	3	1	
F						4	3	
G							5	
H								

7 TEAMS

	A	B	C	D	E	F	G	BYE
A	1	2	3	4	5	6	7	
B		3	4	5	6	7	2	
C			5	6	7	1	4	
D				7	1	2	6	
E					2	3	1	
F						4	3	
G							5	

Figure 69. Round robin schedule for tournament.

8 TEAMS

6 TEAMS
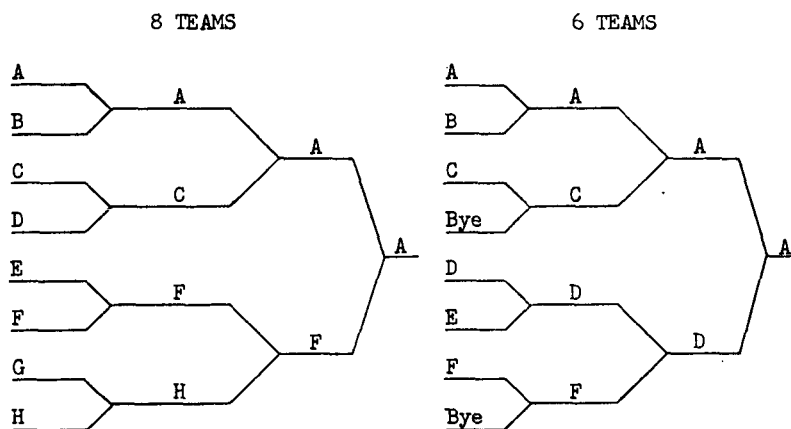
Figure 70. Single elimination schedule for tournament.
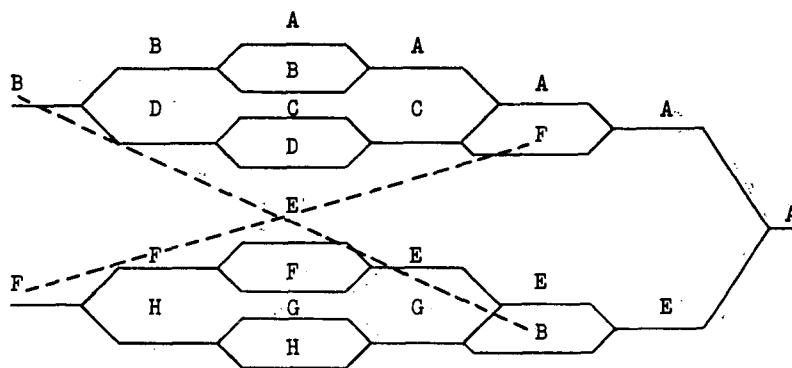
Figure 71. Double elimination schedule for tournament.

c. Single Elimination (fig. 70). This is the fastest method of determining a winner and is used when time is limited. One defeat eliminates an entry from the tournament and the winning team moves on to play other winners. In elimination tournaments, brackets are set up in powers of 2 (4, 8, 16, 32, etc.). When the number competing is not a power of 2, "byes" are used in the first round of play to make up the difference.

d. Double Elimination (fig. 71). The double elimination tournament is based on the same principle as the single, but two defeats are necessary to eliminate an entry instead of one. The bracket system is used with losers of the first round forming a second level tournament, the winners of which are reentered in competition with teams of the first level. If the winner of the second level defeats the winner of the first level, the teams meet again for the championship. The advantage of the double elimination tournament is that it compensates to some extent for "off games." Figure 71 shows the method of reentry and general form of the tournament.

e. Ladder Tournament. The ladder tournament is of value for individual sports such as tennis, but it may also be used for team sports.

Participants are arranged in a list, or ladder. Games are played on a challenge basis over a designated period of time. A participant may challenge anyone higher than herself on the ladder. The winner of the game occupies the higher positions, the loser the lower. If the challenger loses, there is no change in position. The winner of the tournament is the one at the top of the ladder at the end of the allotted time.

117. Use of Brackets

a. Use of Byes. When byes are used in the bracket system, they are used in the first round of play. The number of byes is evenly divided between the top and bottom of the brackets. If the number of byes used is uneven, the extra bye is put at the bottom half of the brackets.

b. Seeding the Entries. Seeding the entries involves selecting the best entries and placing them in the brackets so they will not meet in the early rounds of play. Two or more entries may be seeded. The seeded entries are usually placed in the first, fifth, ninth, thirteenth, etc., bracket slots. Four entries would be seeded in a 16-name bracket and eight in a 32-name bracket.

CHAPTER 9

SWIMMING AND LIFESAVING

Section I. GENERAL

118. Value

Swimming is excellent for body conditioning and one of the finest means of developing grace and coordination. It not only has outstanding recreational value but is vital to survival in water accidents and marine disasters. All persons should learn to swim. Wherever facilities are available, swimming should be incorporated into the physical training program.

119. Objective

Although it is highly desirable that every member of the Women's Army Corps be an expert swimmer, it is hardly to be expected. A valuable beginning can be made, however, by striving for a reasonable degree of proficiency in the following:

a. Elementary backstroke, breast stroke, and side stroke;

b. Ability to swim short distances;

c. Fundamentals of personal water safety;

d. Methods of rescuing those in peril of drowning and of reviving those who have apparently drowned; and

e. Competitive swimming activities, for their recreational value.

120. Facilities

a. Many military installations are equipped with good swimming facilities. Trained personnel are usually available to supervise the swimming program. If swimming facilities are not located on the post, it may be possible to use nearby civilian facilities for recreational purposes or even for actual instruction.

b. If a natural lake or stream is used, the area where beginners are instructed should be from 3½ to 4 feet deep with no sudden drops into deep water. There should be no strong currents or waves. The instructor should be able to see all swimmers. Water for advanced swimmers should be 8 to 12 feet deep.

121. Administration of Program

a. *Instructors.* Only instructors who are competent in swimming methods and water safety should teach swimming. Instructor's qualifications should be similar to those of a qualified American Red Cross Water Safety Instructor. Lifeguards should hold American Red Cross Senior Lifesaving Certificates or have similar qualifications. Male personnel may instruct or supervise this activity. It is advisable, however, to use trained female instructors and lifesavers, if available.

b. *Scheduling.* It is inadvisable to schedule swimming immediately after a meal hour. The policy of waiting from 20 to 30 minutes after meals is generally accepted. The hours immediately preceding noon or the end of the duty day are best for swimming. Controlling the size of groups using the facilities will increase the enjoyment of all.

c. *Personal Hygiene.* It is no longer considered physically dangerous for most women to swim during their menstrual period, if shock from sudden change of temperature is not incurred. When using swimming pools, however, it is advisable to excuse women during this period for sanitary reasons.

d. *Sanitation.*

(1) The sanitation of post swimming facilities is the responsibility of the post medical inspector. The unit com-

mander should inquire into the sanitation of any civilian facilities contemplated for use.

(2) Sanitary measures should be observed by all. No one with skin disease, open sore, fever, cold, cough, or wearing bandages should swim.

e. Safety Precautions.

(1) In indoor pools, lighting should be strong enough so that the bottom of the pool is clearly visible.

(2) Surface along sides and edges of pools should be nonslippery.

(3) At least 13 feet of unobstructed headroom should be provided over diving boards and platforms. Maximum safe elevation of boards and platforms above the water surface is—

Depth of water	*Maximum height above water*	
	Diving board	*Diving platform*
8 feet	3 feet	5 feet
9 feet	5 feet	7 feet
10 feet	7 feet	9 feet
11 feet	10 feet	12 feet

(4) Poles or shepherd's crooks, heaving lines, and ring buoys are standard equipment for any bathing place and should be available.

(5) Lifeguards should closely supervise:

(*a*) Trial swims, where participants' capabilities are not known;

(*b*) Areas in the region of diving boards and ladders, semideep water where nonswimmers are beyond their depth, and deep water;

(6) Use of colored caps to show skill level may be used to permit closer check on participants;

(7) Participants may be paired for mutual assistance (If possible, the same pairs should work together at every practice period) ; and

(8) One person should serve as "lookout" while an instructor is teaching. The lookout sounds a warning if a participant is in trouble and assists her.

f. Suggested Safety Regulations.

(1) Swimming in unsanitary pools, rivers, or other bodies of water is prohibited.

(2) Running or playing games around the pool or at the entrance to the dressing room is prohibited.

(3) Swimming alone, except in emergency, is prohibited.

(4) Never dive into unfamiliar water.

(5) Never utter calls for help in fun.

(6) Enter cold water gradually.

(7) Sunbathe with moderation. Bad burns require the attention of a medical officer and are not in the line of duty.

(8) Lifeguard stands are reserved for lifeguards.

(9) Do not converse with lifeguards except in emergencies.

(10) Lifeguards must be qualified lifesavers and be familiar with approved methods of resuscitation.

g. Care in Case of Accident. In case of accident involving a possible drowning, the person in charge will—

(1) Rescue the victim.

(2) Administer artificial respiration, if necessary.

(3) Send for medical aid.

(4) Clear area where victim is lying of all bystanders.

(5) Send for blankets.

(6) Notify the officer in charge at earliest opportunity.

(7) As soon as possible, make a full report of the accident to the officer in charge.

Section II. SWIMMING COURSES

122. Swimming Instruction

a. Instructors. The swimming instructor should be thoroughly familiar with logical, orderly progressions to fit any level of skill she may teach. She should attempt to teach from the known to the unknown. Lessons should be planned not only as to arrangement of material and content but also for the best use of time and facilities for handling the class as a unit and as individuals.

b. Reference Material. Swimming instructors should make full use of American National Red Cross textbooks, instructor's manuals and guides, and test and certification material. These can be obtained without cost from the post American Red Cross field director.

123. Classification of Swimming Ability

a. General Classifications. Classifications of individuals by swimming ability varies considerably according to the method of instruction used in the swimming course. However, four general classifications apply:

(1) *Nonswimmers*—those who have no swimming ability whatsoever and who are unsafe in shallow or deep water. These persons normally are afraid of water.

(2) *Beginners*—those with elementary swimming skills who can swim safely in shallow water but are unsafe in deep water.

(3) *Intermediate*—those who can swim safely in deep water but who are not proficient in standard swimming strokes.

(4) *Advanced*—those who can swim safely in deep water and who are proficient in standard swimming strokes. No estimate of the average number that will be found in each classification can be made, but it is safe to assume that a large percentage will be either nonswimmers or beginners. A program of swimming and water safety instruction suitable to the needs of each classification should be established wherever possible, but primary emphasis should always be placed upon the development of elementary skills and water safety among nonswimmers and beginners. Swimming programs should be presented in such a manner that students can progress from one classification to another as their skill improves.

b. Self-Classification. A system of self-classification may be used initially. The instructor should first ask the students to separate themselves into two main groups: those who can swim in deep water and those who cannot. Further division of the latter group should then be made by asking how many of these can swim in shallow water. This method provides the instructor with three general classifications:

(1) Nonswimmers.

(2) Beginners (those who can swim in shallow water).

(3) Intermediate and advanced swimmers (those who can swim in deep water).

Self-classification should always be followed by closely supervised testing of all swimmers to insure that they have classified themselves correctly. The women should be asked to swim under supervision: beginners in shallow water; intermediate and advanced in deep water. Observation of the intermediate and advanced swimmers will enable the instructor to separate the women into these two categories. When there is doubt, it is better to place the individual in the less skilled group.

c. Classification Testing. If time and facilities permit, classification tests may be used in lieu of or in addition to self-classification. Tests established by the American Red Cross will prove helpful. Classes should be organized to permit advancement from one group to another as skill increases and tests should be used as the basis for progression.

124. Instruction for Nonswimmers

a. General. Nonswimmers lack the ability to propel themselves through shallow water or to regain their balance in it once they have lost their footing. Therefore, they can drown as easily in shallow water as in deep. The primary objective of all instruction to the nonswimmer must be to teach the basic skills of regaining her balance in shallow water and propelling herself safely through it. Once she has developed this ability, progression to swimming in deep water is merely a matter of motivation and additional training.

b. Fundamental Principles. It is important that the nonswimmer master certain fundamental principles of swimming if she is to progress to more difficult skills and gain the self-confidence necessary for deep water. Methods described in the American Red Cross Beginner Course provide excellent guidelines in the teach-

ing of these principles, which are:

(1) Buoyancy;

(2) Water balance;

(3) Breath control;

(4) Relaxation;

(5) Floating and swimming positions; and

(6) Fundamental propulsive movements.

c. Skills To Be Achieved. Mastery of the following skills is essential for the nonswimmer:

(1) Breath control;

(2) Rhythmic breathing;

(3) Prone float;

(4) Back float;

(5) Prone glide;

(6) Back glide;

(7) Prone glide with kick;

(8) Back glide with kick;

(9) Arm stroke (beginner);

(10) Finning;

(11) Combined human stroke (front) or dog paddle;

(12) Combined stroke (back);

(13) Change of direction;

(14) Turning over; and

(15) Jumping into waist deep water.

d. Results of Nonswimmer's Course. If the objectives of the nonswimmer's course are met, the student should be able at the conclusion of the course to float and swim safely in shallow water.

125. Instruction for Beginner Swimmers

a. General. Beginner swimmers are those with elementary swimming skills who can swim safely in shallow water but are unsafe in deep water. The primary objective of all instruction for the beginner is to teach her to enter and swim safely in deep water.

b. Fundamental Principles. It is essential that the beginner have a clear understanding of the fundamental principles listed in paragraph 124. In addition, she must develop an appreciation of buoyancy and water balance in deep water with particular emphasis on correct body position in swimming.

c. Skills To Be Achieved. The beginner must master all skills listed in paragraph 124, as well as:

(1) Treading water;

(2) Leveling off in deep water;

(3) Turning over in deep water;

(4) Reversing direction in deep water; and

(5) Jumping into deep water.

d. Results of Beginner's Course. If the objectives of the beginner's course are met, the beginner should be able at the end of the course to jump into deep water, level off, and swim to safety.

126. Instruction for Intermediate Swimmers

a. General. Intermediate swimmers have the ability to enter and swim safely in deep water but normally lack formal training in recognized swimming strokes. The objectives of instruction for the intermediate swimmer are to develop in the swimmer confidence and ability in deep water, teach her commonly used combined swimming strokes, and provide her with a foundation in basic swimming skills upon which she can develop more advanced skills.

b. Fundamental Principles. In the intermediate group, continued emphasis must be placed upon fundamental principles for lower skilled groups. In addition, the importance of rhythm, relaxation, and power in executing combined strokes should be introduced.

c. Skills To Be Achieved. The intermediate swimmer should master as many of the following skills as possible:

(1) *Leg Strokes.* Flutter kick (prone and supine), elementary back stroke kick, breast stroke kick, scissors kick.

(2) *Arm Strokes.* Front crawl, elementary back stroke, breast stroke, side stroke, back crawl.

(3) *Combined Strokes.* Elementary back stroke, front crawl, breast stroke, side stroke, back crawl.

(4) *Dives.* Surface dive, standing front dive.

d. Results of Intermediate Swimmer's Course.

If the objectives of the intermediate swimmer's course are met, the swimmer should be able at the conclusion of the course to perform common combined strokes in a reasonably proficient manner and be completely at home in deep water.

127. Instruction for Advanced Swimmers

a. General. Advanced swimmers normally have a good foundation in common combined swimming strokes and are completely at home in deep water. The objectives of advanced swimming instruction are to perfect the form of combined strokes already learned, develop endurance, and teach less common combined strokes and advanced skills which the swimmer can use for her own enjoyment or as a foundation for lifesaver training.

b. Fundamental Principles. The advanced swimmer should review fundamental principles for lower classifications and gain an added appreciation of the enjoyment which can come from proficiency in advanced swimming skills.

c. Skills To Be Achieved. The following skills are suitable for instruction to advanced swimmers:

(1) *Combined Strokes.* Overarm side stroke, inverted breast stroke, trudgen, trudgen crawl, double trudgen.

(2) *Types of Swimming.* Synchronized swimming and competitive swimming.

(3) *Diving.* Platform and springboard diving.

d. Results of Advanced Course. If the objectives of the advanced course are met, the swimmer should have gained by the end of the course proficiency and versatility in swimming skills at all levels and be prepared to advance to lifesaver and instructor training.

Section III. WATER GAMES

128. General

Water games provide an excellent means for the practice of swimming skills as well as for recreation. Games should be carefully selected in accordance with the ability of the participants, and safety measures carefully enforced. Many familiar land games and relays can be adapted to the water. The following will provide guidance in the selection of water games for different skill groups.

129. Games for Nonswimmers

a. Rippling-Rhythm Contest.

(1) *Area.* Shallow water.

(2) *Equipment.* None.

(3) *Number of players.* 2 to 20.

(4) *Organization.* Line.

(5) *Description.* Contestants hold onto the pool, crib, or area line with both hands. Feet remain on the bottom. The face is submerged, nose pointing down, and bubbles are created by exhaling. When most of the air has been expelled, the head is turned right or left until the mouth and nose are free of the water. Another breath is inhaled through the mouth and the face is turned back again—nose pointing down—then exhalation takes place again. This process should be repeated without interruption, rhythmically as many times as the contestant is able to perform without discomfort. The contest is won by the person who manages to repeat the rhythmic breathing process the greatest number of times without stopping to wipe her eyes, cough, or sneeze.

Each complete cycle should occupy approximately six seconds: 3 seconds for inhalation, and 3 seconds for exhalation. Contestants should be cautioned not to inhale too deeply. If too much air is taken in, it is difficult to exhale all of it under water within the allotted time. Contestants should understand that rhythm, not speed, is essential.

b. In-and-Out Race.

(1) *Area.* Shallow water.

(2) *Equipment.* None.

(3) *Number of players.* 2 or more.

(4) *Organization.* Line.

(5) *Description.* Contestants line up on the edge of the pool or beach. At a signal, they enter the water, wade as fast as possible to a previously designated line, submerge, come up, turn around, and race back to the starting line. The first one back and out of the water wins. If a pool is used, the first one back and seated on deck is the winner.

> *Note.* It is presumed that the instructor has taught the beginners the proper and safe way to get into and out of the pool before this race is attempted. When a beach waterfront is being used no problem is presented, since the swimmers run into water from the beach and out the same way.

c. *Duck-for-the-Oyster Relay.*

(1) *Area.* Shallow water.

(2) *Equipment.* Diving brick or stone for each team.

(3) *Number of players.* 8 or more.

(4) *Organization.* Even-numbered teams, single file.

(5) *Description.* Players on each team stand in waist deep water, one player in back of the other at a distance of approximately 2½ feet. The first player on each team has a diving brick, heavy diving ring, large stone, or similar object which is used as the "oyster." At the start, the first player on each team holds the "oyster" over her head. On the starting signal, she drops it in back of her into the space between her and the next in line. The next player ducks under, retrieves the object, stands up, and drops it in back of her. This action continues until the "oyster" has reached the last player in line. She retrieves it and runs to the front of the file. Everyone moves back a place and the action starts all over again. The team to get all players back to their original places first wins. Variations using more than one object may be devised.

d. *Bobbing Race.*

(1) *Area.* Shallow (chest deep) water.

(2) *Equipment.* None.

(3) *Number of players.* 2 or more.

(4) *Organization.* Team or individual.

(5) *Description.* Players line up as a team or individuals on one side of a pool or designated area. At a signal, they start for the opposite side, propelling themselves by bobbing. To bob, the player keeps both feet together, ducks all the way under water, places her feet on the bottom, and pushes off, straightening up so that the body comes out of the water to the hips. She then ducks under again and continues the above action until she reaches the opposite side of the pool. Players should lean forward slightly to obtain a forward motion and use their arms for balance and extra speed forward. When the game is played with teams, the first team to have all members on the opposite side of the pool wins. If played individually, the first contestant to reach the opposite side is declared winner.

130. Games for Beginner Swimmers

a. *Jellyfish Whistle.*

(1) *Area.* Shallow water (chest deep).

(2) *Equipment.* Whistle.

(3) *Number of players.* 2 or more.

(4) *Organization.* Individual.

(5) *Description.* Contestants line up at a starting line in chest deep water. At a signal they start wading as fast as possible toward a previously designated finish line. When the instructor blows a whistle, each immediately stops and does a jellyfish float. When the whistle blows again, all continue wading. The whistle should be blown several times before the finish line is reached. The person who reaches the finish line first is the winner. Variations may be devised using prone or back floats or glides.

b. Finny Fun.

    (1) *Area.* Shallow water.

    (2) *Equipment.* None.

    (3) *Number of players.* 8 or more.

    (4) *Organization.* Teams of 4 each.

    (5) *Description.* Teams are arranged in shuttle formation with from 15 to 20 feet between team halves. At a signal the first swimmer on each team does a back float and fins (using arms only) across the area to the opposite member of her team, who then fins to the opposite side. This action continues until all team members are in their original starting positions. Variations may be devised using other propulsive skills.

c. Cork Retrieve.

    (1) *Area.* Shallow water.

    (2) *Equipment.* 30 to 50 corks painted white.

    (3) *Number of players.* 10 or more.

    (4) *Organization.* Team.

    (5) *Description.* Members of each team line themselves along the edges of the pool, facing each other. If a beach area is used, they face each other over a distance of from 20 to 35 feet. A home base for each team is designated as the pool deck or beach area directly to its rear. The instructor throws the corks into the area between the teams. At a signal, all scramble for the corks. Each player may retrieve only one at a time. When a cork is secured, the player must do a back glide and kick to transport it to home base. The team in possession of the most corks at the end of 3 minutes wins the game.

d. Shallow Water Punchball.

    (1) *Area.* Shallow water area approximately 40 feet square, with shallowest corner designated home base and corner diagonally opposite first base.

    (2) *Equipment.* Water punchball or water polo ball.

    (3) *Number of players.* 10 or more.

    (4) *Organization.* Team.

    (5) *Description.* One team scatters throughout the playing area, the other team is at bat. One player from the batting team stands at home base, punches the ball into the playing area, and attempts to reach first base and return home without being hit by it. Fielders attempt to catch the ball and hit the batter with it. They may not walk or swim with the ball but must pass it to each other. If a fielder walks or swims with the ball, the batting team is awarded a point. If the batter is hit by the ball, she is out and the fielding team gains a point. The batter may duck under water to avoid being hit but may not deviate from the path to the base and back. When three batters are out, the teams change places. Five innings are usually sufficient for beginners, but any predetermined number of innings may be played up to nine. The team scoring the greater number of points at the end of the game wins.

131. Games for Intermediate Swimmers

a. Kickers Battle.

    (1) *Area.* Shallow water.

    (2) *Equipment.* One kick board (swim board) for every 2 players.

    (3) *Number of players.* Any even number.

    (4) *Organization.* Partner.

    (5) *Description.* Partners face each other in the center of the shallow water, with the kick board between them. Each holds onto an end of the board. At a signal, they start kicking in an effort to force the other backward. The person who is able to force her partner behind a predesignated boundary is the winner. Handy boundaries are lane markers on the bottom of the pool. For variety, the game can be made into a team event by having all members of one team face the members of the opposing team and substituting a long bamboo pole for the kick board.

b. Shallow Water Basketball.

(1) *Area.* Water area at least 20 feet square and preferably larger, no deeper than chest level at any place. The area should be marked off by 4 boundaries, with a goal established on 2 boundaries opposite each other.

(2) *Equipment.* Water polo ball, baskets, and colored caps to distinguish teams. Washbaskets, large wastebaskets, or washtubs may be used for goals with the tops of the baskets 3 or 4 feet above the surface of the water.

(3) *Number of players.* 8 to 12.

(4) *Organization.* Team.

(5) *Description.* Each team lines up in its own half of the area with the goal it is defending in back of it. The ball is tossed into the water by the referee, who blows a whistle to start the game. Players may go after the ball only by swimming. Once a team has possession of the ball it may set up a passing attack and try to score a goal by throwing the ball into the opposing team's basket. Players in possession of the ball must pass it within three seconds and may not move with the ball unless they swim.

(6) *Additional rules.* No personal contact or ducking is allowed. The penalty for these infractions is 2 foul shots taken from a point 8 feet in front of the goal by the person on whom the foul was committed. After the second foul shot, whether it was made or missed, the ball is again set in play in the center.

When the ball is thrown or deflected out of bounds by one team, a member of the opposing team is awarded the ball at the point where it left the area. All other players must be at least 3 feet away from the player in possession of the ball at the out-of-bounds point.

When two opposing players gain possession of the ball simultaneously, the referee blows the whistle and the ball is set in play by a jump ball.

The game is usually played in 4-minute quarters, with a 1-minute rest between. The instructor should use discretion on the time limits, however, depending upon the ability of the players. The team with the highest score at the end of the game wins. A field goal counts 2 points, foul shot 1 point.

c. Underwater Archery.

(1) *Area.* Shoulder deep water.

(2) *Equipment.* Target (heavy aluminum tray or cookie sheet with concentric rings painted on it as in archery), pennies.

(3) *Number of players.* 2 or more.

(4) *Organization.* Individual or team.

(5) *Description.* The target is placed on the bottom of the pool approximately 12 feet from the side and in shoulder deep water. Contestants ("archers") push off from a seated position on the edge of the pool, head first and arms extended. To push off with more success, heels should be placed in the pool gutter. Each archer carries a penny. The object of the game is to glide over the target under water and drop the penny on it. All shots must be made while the archer is in prone position with at least face under water. A full game consists of 6 shots per archer. As in archery, a bullseye counts 9, the next target band 7, the next 5, and the outermost ring 1. The winner is the archer with the highest score after 6 shots.

(6) *Variations.* Each archer carries all 6 pennies with her and floats above the target without coming up for air while she releases the pennies, one at a time. The game may also be played as a team event with each member of each team taking one shot. When large numbers participate, one target should be provided for each group of six.

d. Deep Water Newcomb.

(1) *Area.* Deep water area approximately 60 feet square.

(2) *Equipment.* Beach ball; net or rope

stretched across the area, dividing it into two equal parts. The top of the net or rope should be approximately 5 feet above the surface of the water.

(3) *Number of players.* 16 or more.

(4) *Organization.* Team.

(5) *Description.* Teams face each other across the net, with members spread out to cover the playing area. To start the game, a beach ball is put into play by one team. One of its players throws the ball over the net and it must be caught by an opposing player before it touches the water. The player catching the ball may toss it back over the net immediately or she may pass it to another player on her team to do so. Only one pass is permitted before the ball is tossed over the net. No throws under the net are allowed. Whenever a ball is missed, the opposing team receives a point. Play is in 1-minute periods to start but, as players gain endurance in treading, the periods may be lengthened. Rest periods should be 30 seconds long. If the game is slow, or one or two players are doing all the catching and throwing, a second ball may be introduced.

132. Games for Advanced Swimmers

a. *Deep Water Volleyball.*

(1) *Area.* Deep water area, approximately 40 feet long and 25 feet wide.

(2) *Equipment.* Rubber volleyball; net or rope dividing the area into 2 equal courts. The top of the net or rope should be 4 feet above the surface of the water.

(3) *Number of players.* 12 or more.

(4) *Organization.* Team.

(5) *Description.* Teams face each other across the net. All rules of land volleyball apply, but modifications may be introduced if these rules prove too exacting. Players should be skilled at treading water. Time limits may be set to accommodate the group. Quarters of 5 minutes' duration are

suggested, with a 2-minute rest period between quarters and a 5-minute rest period at the half.

b. *Greased Watermelon Contest.*

(1) *Area.* Deep water.

(2) *Equipment.* One large, greased watermelon.

(3) *Number of players.* Any number.

(4) *Organization.* Team.

(5) *Description.* Players are divided into 2 teams and face each other across a deep water area. The land to the rear of each team is its home base. A large, well-greased watermelon is placed in the center of the deep water area. At a signal, each team leaves home base and attempts to carry the melon back to its home base. Anyone who has possession of the melon may be ducked until she lets it go. The team which gets the melon back to its home base and out of the water wins.

c. *Deep Water Raiders.*

(1) *Area.* Deep water.

(2) *Equipment.* 40 to 50 coins or small stones.

(3) *Number of players.* 16 to 20.

(4) *Organization.* 2 teams.

(5) *Description.* Each team has a home base in the deep water area where it stores its 20 to 25 coins or small stones. At a signal, members of each team attempt to raid the opponents' home base and purloin their coins or stones. If an opponent is tagged while she is attempting to raid, she must stay within her opponents' home base area until she is freed by one of her teammates, who must tag her. The contest is on a time basis, and the team possessing the larger number of coins or stones at the end of the time period wins.

d. *Keep Away.*

(1) *Area.* Deep water area at least 25 feet wide.

(2) *Equipment.* Water polo ball; identifying article such as bathing caps of the same color or ribbon of same color

tied on arm of members of the same team.

(3) *Number of players.* 4 or more.

(4) *Organization.* Team.

(5) *Description.* Teams line up opposite each other across the deep water area. The instructor tosses a water polo ball into the area between the teams. As it hits the water, each player dashes to try to gain possession of the ball. The team which gains possession tries to keep it, but no one may hold the ball more than 3 seconds. If the ball is not passed to another team member within 3 seconds, the opposing team gains possession.

(6) *Variation.* At intervals, the instructor turns her back to the players and blows a whistle. The team in possession of the ball when the whistle blows gains a point. At the end of a predetermined period, the team with the most points wins.

Section IV. LIFESAVING AND WATER SAFETY

133. General

Every member of the Women's Army Corps should have a fair working knowledge of lifesaving and water safety. Although lifesaving instruction and water safety courses must be reserved for skilled swimmers, water safety instruction should be included at every level of swimming instruction.

a. Importance of Land Rescue. Since many drownings or near-drownings occur within relatively easy reach of land, it is important that everyone understand the means for rescue from land. The motto, "Throw—Row—Go" means that a would-be rescuer should enter the water only after exhausting all other possibilities. The simple reaching with a hand or foot from a dock or edge of the water may be used to assist someone to safety. If a greater reach is needed, a towel, article of clothing, rope, or pole may be extended to the victim. A ring buoy thrown to a victim gives still greater extension. Supporting objects such as a kick board, swim board, plank, life preserver, or other free-floating object may be floated to a victim. A boat is also often at hand to effect rescue. Swimming rescue is the last resort. Too often it results in the drowning of both victim and rescuer when other aids were readily available.

b. Lifesaving. Lifesaving skills lead the swimmer on to greater accomplishments. Only fairly strong swimmers can be expected to master the techniques of water rescue work. American Red Cross certified swimming and lifesaving courses are generally available and should be used to supplement swimming instruction at this level.

134. Resuscitation

Submersion for over 5 minutes is usually fatal but an effort to revive the apparently drowned should always be made. It is very important that artificial respiration be started at the earliest possible moment after the victim has been removed from the water. The principles and methods of artificial respiration as set forth in FM 21–11 should be thoroughly understood by all connected with the swimming program.

APPENDIX I

REFERENCES

AR 28–1	Special Services
AR 28–52	Army Sports Program
AR 28–56	Bowling Alley Operations and Relationship with the Army Bowling Program
AR 320–5	Dictionary of United States Army Terms
AR 320–50	Authorized Abbreviations
AR 600–9	Army Physical Fitness Program
FM 11–41	Film and Equipment Exchange Operations
FM 21–5	Military Training Management
FM 21–6	Techniques of Military Instruction
FM 21–20	Physical Training
FM 22–5	Drill and Ceremonies
TM 21–200	Physical Conditioning
TM 21–225	The Army Sports Program
DA Pam 21–2	Physical Fitness Program for Women in the Army
DA Pam 21–44	Hygiene Educational Guide for Women Officers and Women Officer Candidates of the Armed Forces
DA Pam 108–1	Index of Army Motion Pictures, Film Strips, Slides, and Phono-Recordings
DA Pam 310–5	Index of Graphic Training Aids and Devices
TB Med 163	Sanitary Control of Army Swimming Pools and Swimming Areas
TB Med 175	The Etiology, Prevention, Diagnosis, Treatment of Adverse Effect of Heat
ATP 21–121	Basic Training Program for Female Military Personnel without Prior Service

APPENDIX II

BIBLIOGRAPHY

SPORTS

Sports Library for Girls and Women. Prepared by The Division for Girls and Women's Sports (DGWS) of the American Association for Health, Physical Education, and Recreation. Each guide contains official playing rules for girls and women, articles on techniques, teaching, organization, bibliographies, and certain special features related to the sports covered in the respective books. All publications should be ordered from The Division for Girls and Women's Sports, 1201 Sixteenth Street, N.W., Washington, D.C., 20036. Current publications are:

Official Aquatics Guide
Official Archery—Riding Guide
Official Basketball Guide
Official Bowling—Fencing—Golf Guide
Official Field Hockey—Lacrosse Guide
Official Gymnastics Guide
Official Outing Activities and Winter Sports Guide
Official Soccer—Speedball Guide
Official Softball Guide
Official Tennis—Badminton Guide
Official Track and Field Guide
Official Volleyball Guide

SWIMMING AND LIFESAVING

The American National Red Cross publishes textbooks, instructor's manuals, teaching aids, posters, films, and forms on swimming and lifesaving. They are available from local (installation) Red Cross chapters or the area office. Useful publications for a unit swimming program are:

Swimming and Diving
Lifesaving and Water Safety
Water Safety Instructor's Manual
Teaching Johnny to Swim (film)

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CLL (1)	WAC Det (2)
CRD (1)	Br Svc Sch (2) except
CMH (1)	USAIS (5)
TIG (1)	USAC (5)
TAG (1)	DWAC (2)

NG: None.

USAR: None.

For explanation of abbreviations used, see AR 320–50.