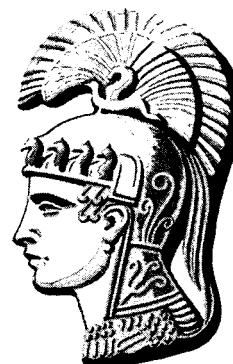


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FM 35-20

WAR DEPARTMENT
W.A.C. Field Manual

PHYSICAL
TRAINING



15 JULY, 1943

FM 35-20

W A R D E P A R T M E N T

W. A. C. Field Manual

PHYSICAL TRAINING



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BY ORDER OF THE SECRETARY OF WAR:

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OFFICIAL:

J. A. ULIO,
Major General,
The Adjutant General.

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(For explanation of symbols see FM 21-6.)

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YOU MUST BE FIT

YOU are a member of the first Women's Army in the history of the United States. You are one of the small percentage of women qualified in mind and body to perform a soldier's noncombat duties.

These duties are many. The demands of war are varied, endless, and merciless. To satisfy these demands, you must be fit.

You have successfully passed a rigid physical examination. You are organically sound. Now you must build the strength and stamina, the control and coordination, to do a man's work any hour of the day, every day of the month.

To condition your body so that it may meet every demand made of it, a course of planned exercises has been developed. It has been planned by women, for women. It recognizes your capacities. It is based upon a knowledge of the tasks you may be called upon to perform.

These exercises are simple and progressive. By slow, methodical stages, they carry you to a new and better state of physical condition, visibly expressed in a correct, attractive carriage and an abundance of energy. They assist in supplying the mental, emotional, and physical stability you need to become an effective member of an effective organization.

The eyes of the Army—and of the Nation—are on you. It is of prime importance that you look well, feel well, and work well throughout your military service.

YOU MUST BE FIT



WE ARE FIGHTING A TOTAL WAR



TO T A L W A R calls every man, woman, and child into service. This type of war has been forced upon us. For over a decade the women of Germany, Italy, and Japan have been training for war. Their duties range from front line combat to manual labor.

The women of the United Nations have been swift to take up the challenge. Close to a half million British women are in uniform today. The

Auxiliary Territorial Service (ATS) performs duties similar to yours. ATS serves as motor mechanics, cooks, truck drivers, radio locators, gunnery researchers, and in many other jobs formerly held by men.

The women of Russia are fighting for their lives. Thousands are with the Army in the field, serving as technicians, radio operators, messengers, engineers, drivers, and medical personnel. Some serve as sharpshooters. As guerrillas, Russian women have taken a heavy toll of the invaders. Women dig trenches and carry munitions on their backs to the troops.

The women of Japan know the true, bitter meaning of war. For years they have toiled 12 and 14 hours a day in the munitions plants at Nagoya and Osaka. Thousands are serving with the Imperial Army as messengers, radio operators, orderlies, and drivers. Reports from combat zones tell of women in uniform, serving with shock troops and piloting combat planes.

Women in uniform have long been a familiar sight in Germany and Italy. The Nazi Labor Service drafts all girls between 17 and 25 who are not usefully employed in the factories or the Army Auxiliary services. Younger girls are enrolled in the Hitler Girls' Organization. German women are in the war, to the limit.

The war will not be won by women alone. But victory in total war will go to the side which utilizes the most women, and the fittest.

TOTAL WAR IS A WOMAN'S WAR



YOUR JOB: TO REPLACE MEN

YOUR TASK is to do the things which, if you did not do them, would have to be done by men taken from the fighting ranks; men whose presence in the battle line may mean victory, whose absence might mean defeat.

You must be able to do these things alone and unaided. You must be ready 24 hours a day, 7 days a week, and every day of the month. War makes no distinction between sexes. When the order comes you must obey it—without question and without excuse.

None of your duties will be beyond the capacity of a woman in fit condition. But nearly all military duties will be beyond the ability of a woman who lacks strength, who tires easily, whose mind and body do not work in swift accord, who is constantly prey to illness and moods.

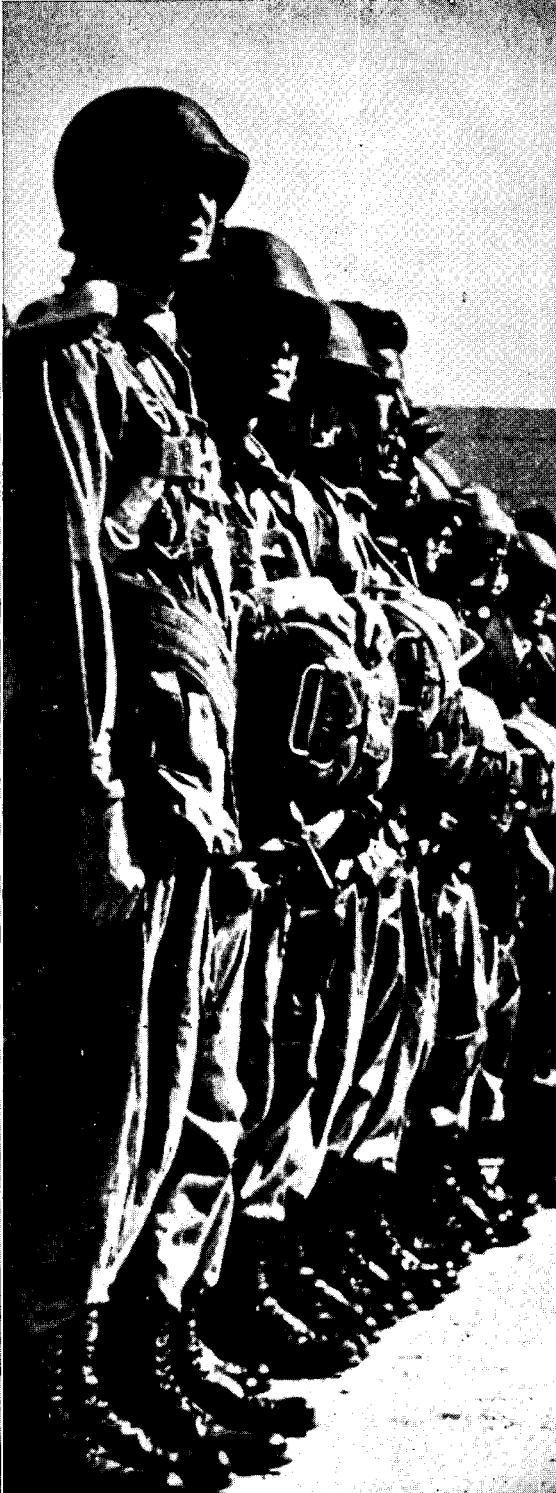
None of us knows what the future holds forth. None of us can foretell what emergencies may arise, nor what tasks we may be called upon to perform. Better to build up for the job—today—than to fall down on the job—tomorrow.

Men are naturally endowed with greater physical strength than women. But women at war, abroad and at home, are proving daily that woman's strength, properly trained and developed, is ample to perform hundreds of vital wartime tasks. And that women, in achieving the muscular tone and control essential to their work, realize greater poise, more grace, and better health than they ever enjoyed before.

The Corps must sustain itself. Except for the hardest physical labor, you must do every job that comes your way.

When a man moves out, be ready to take over. Be ready to give the job all you have. Be ready with everything it takes to do it well.

BE READY TO TAKE OVER





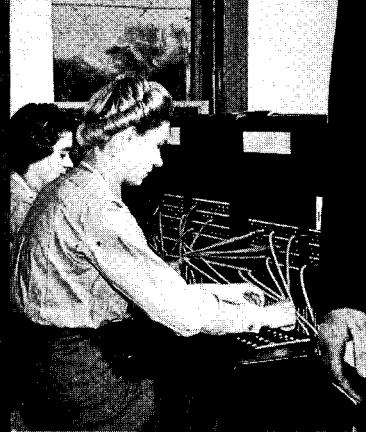
BE READY FOR ANY JOB

YOU MAY serve as a chauffeur, a telephone operator, a cook, a stenographer, or a mechanic. You may be assigned to any or many of the long and growing list of occupations in which women serve. War may take you to a far-off corner of the world, to trying climates, to primitive places where life is maintained with minimum comfort, to areas where the enemy may even deny you food and sleep for days at a stretch.

Whatever your job, this is sure: it will require a strong body and steady nerves—the ability to “take it.”

Moreover, your appearance must give assurance that you have this ability: it must convince all who work with you that you are on the job, a skilled, trained, and reliable member of a winning team. Your carriage must be military. Your skin must be healthy and clear. Your responses must be quick. Your manner must be alert. You must have the bearing and the self-confidence of a trained soldier.

These qualities must be developed before you report for your job. Planned exercise must prepare your body and mind to take over and to work hard with a minimum of “breaking in.” Planned exercise must become a habit which, supplemented by work and recreation, will keep you fit throughout your service.



HAVE THESE FOUR QUALITIES

STRENGTH

YOU must have strength. You must be able to perform with ease the heaviest tasks which you may encounter. You must be able to persist for long periods of time. This means neither "new" muscles nor large muscles. It means giving the muscles you have sufficient tone and capacity to do their work. It means *balanced* muscle control, with each set of muscles helping the others, to make work easier.

STAMINA

You must have stamina. You must be able to stay with a job until it is finished. It means a strong heart that pumps more blood per stroke, that does more work with less effort. It means lungs that breathe deeply and regularly—that take in plenty of fresh, oxygen-rich air and expel used air. A strong heart and good lungs keep the cells of your body amply supplied with fuel, and rid them of the waste products of fatigue.

COORDINATION

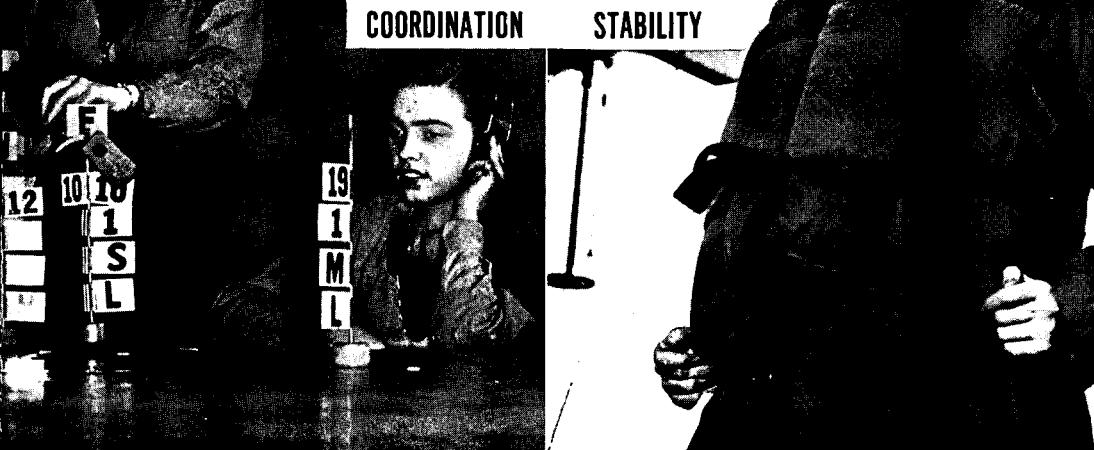
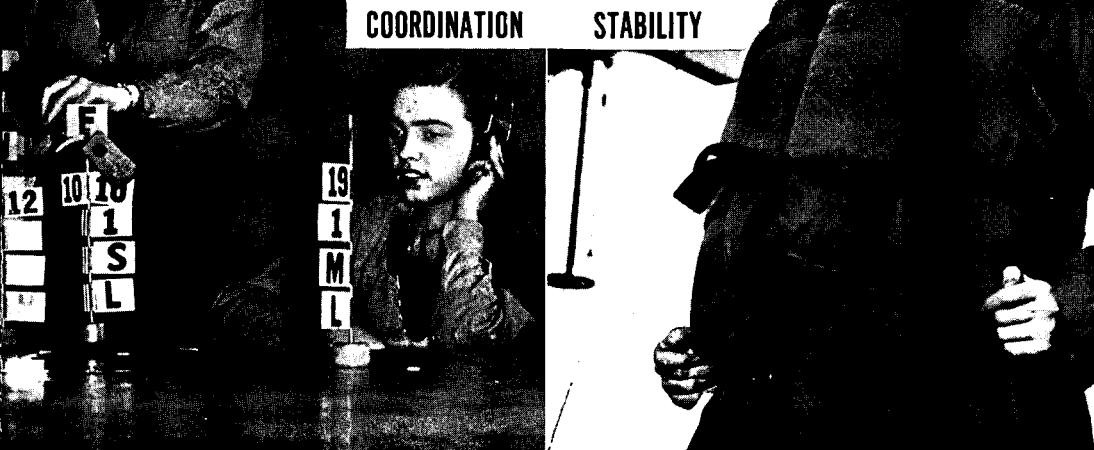
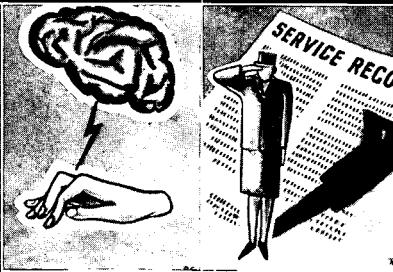
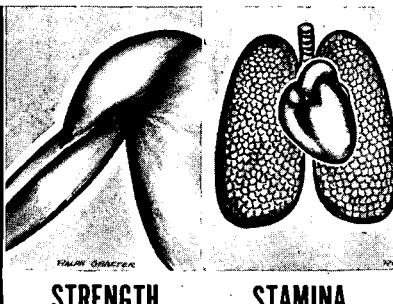
You must have coordination of mind and body. When your brain receives a command your body must respond instantly. The "communications system" between body and brain must be efficient. The muscular and nervous systems must operate together smoothly. You must be alert—mind and body must be a well-drilled team.

STABILITY

You must have stability. You must be on the job all day, every day, as long as you are needed. Your nervous system must stand the "gaff." Your digestive system must function properly. Elimination must be regular. Menstruation must be normal and easy. You must be a completely reliable member of your unit. "In-and-outers" wreck an organization's efficiency.

Put yourself in the place of the women on the opposite page. Your duties may be as varied and as demanding. Get ready now.

YOUR WORK DEPENDS UPON THEM





FITNESS CAN'T BE FAKE

PHYSICAL fitness can't be faked. You are fit, or you aren't. Strength, stamina, coordination, and stability do not come in bottles, pills, nor powder, nor in foundation garments, nor in diets.

The test of true physical fitness is hard work. A girdle alone won't hold you up throughout a tough day in the cab of a truck. Firmly toned abdominal muscles will.

There are no "rules" against synthetic beauty. But war exacts a cruel toll of the woman who prefers a foundation garment to a basic foundation of muscular tone.

It is important that your complexion be clear because of functional regularity rather than laxatives; that your color be healthy because of a clean, well-aired bloodstream rather than lipstick and rouge; that excess fat be melted off, not by a weakening diet, but through strengthening exercise.

In civilian life women can get by on fashions, fads, and fancies. War, however, demands the real thing. Physical fitness is not something you put on and take off. It must be there—in you, with you—all the time, wherever you may be.



WHAT PLANNED EXERCISE DOES

Study the pictures on the opposite page. The full length picture shows the trim, attractive military carriage as contrasted with the fleshy silhouette behind it. How does planned exercise help to achieve this?

MUSCULAR TONE

It improves muscular tone. It helps to shed excess fat, or, if underweight, it builds a substructure of flexible muscle and healthy, compact flesh. Without increasing the size of the muscles, it improves their endurance and tone. It does this in a balanced manner, so that one part of the body is not overdeveloped at the expense of another. It teaches muscles to work together, easing the strain of work and conserving energy.

STABILITY

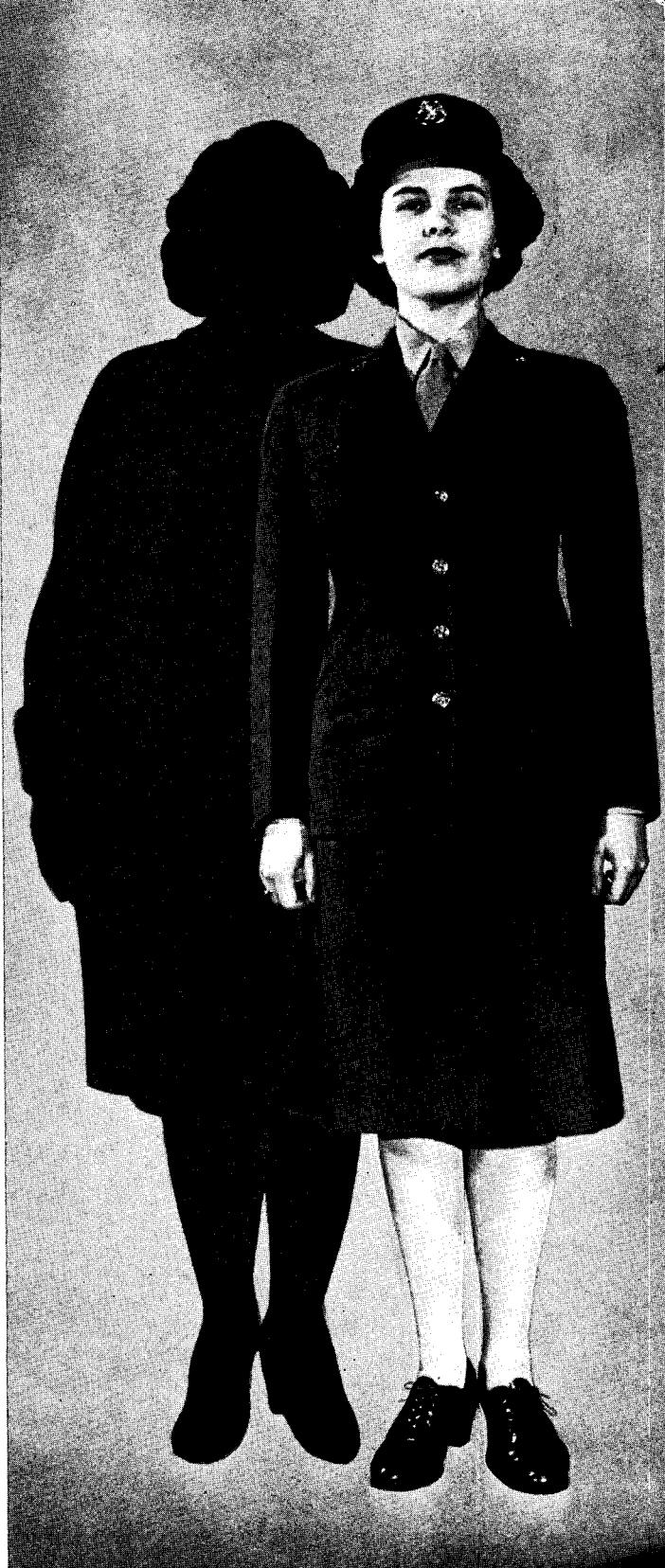
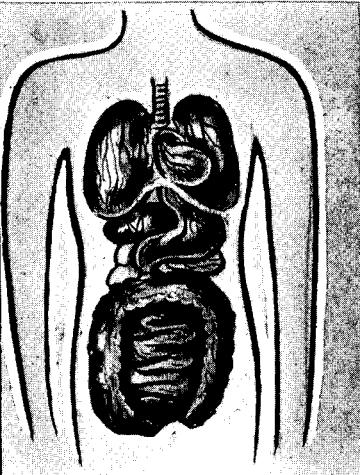
It makes for stability. It gives tone to the muscles and organs of the pelvic region. It helps to relieve congestion and thereby menstrual distress. Duties can be performed without lessened efficiency.

ELIMINATION

It aids elimination. It prods the sweat glands to action, removing impurities through the skin. It forces the lungs to expel more completely the waste products generated by the human motor. It stimulates and regulates intestines and kidneys. A clear complexion is a natural result of regular, complete elimination.

RESISTANCE

It increases resistance. Better functioning of the heart, lungs, and digestive and circulatory systems has a beneficial effect on the body as a whole. You can stand heat and cold better. You are less likely to be thrown off balance by illness and deprivation. That's important whether you're headed overseas—or holding down a man's job at home.



OTHER ADVANTAGES OF EXERCISE

POSTURE

It improves posture. Planned or systematic exercise aims at reaching the whole muscular structure. This means that opposing muscle groups balance and thus maintain the bony structure in a balanced position. The correct bone alignment provides for the correct positions of the internal organs. Correct position of the organs assists them in the performance of their various functions. Good posture makes for grace, poise, and unstilted military bearing.

STAMINA

It improves stamina. It forces muscles and organs to the limit of their capacity. Thus, it stimulates their development. It systematically steps up heart and lung action until these organs can work harder and longer with less effort and fatigue.

RELIEVES TENSION

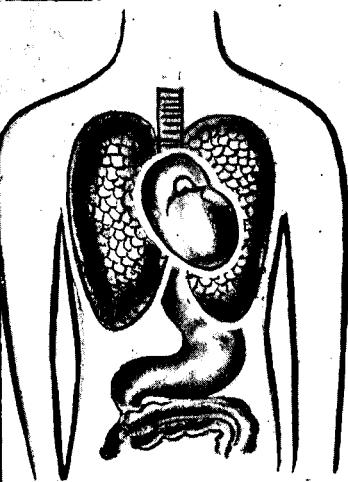
It relieves tension. Steady, prolonged concentration on the job tends to tighten nerves and muscles and increases fatigue. Planned exercise at suitable intervals relaxes the muscles and nerves and restores a feeling of well-being.

COORDINATION

It improves coordination. It accustoms body and mind to work in perfect accord—the brain to receive and transmit orders rapidly, the body to obey orders correctly and speedily. Perfect coordination builds self-confidence. It inspires the confidence of others. It develops self-control and poise. It is the essence of leadership.

WHAT IS THE OVER-ALL AIM?

Planned exercise develops maximum body fitness in minimum time. It helps you maintain this fitness throughout your military service. All that follows in this program contributes to this end. Some of the exercises may seem too easy. Others may seem too hard. By first doing the easier ones faithfully, you'll be able to do the hard ones later—with ease. The results of planned exercise described above will then be fully achieved.



GOOD POSTURE MAKES GOOD SENSE

AS long as you are in the Army you will hear much about posture. These pictures show you why.

At the left is a column of wooden blocks, one stacked above the other in orderly fashion. Each block rests firmly on the block below it, and the bottom block rests firmly on the ground. This column will not fall over easily, for it obeys a simple law of engineering. The column supports itself because it is erect and upright—there are no stresses and strains at work to pull it down.

Now study the column of blocks at the right. A slight touch and down it goes. For none of these blocks helps to support the others. On the contrary, each block weakens the structure. The entire column is prey to stresses set up by the crookedly placed blocks. Gravity pulls down on this column. It doesn't take much to make it collapse.

You wouldn't build your house in a zigzag manner. Neither is it wise to let your body fall into a zigzag shape.

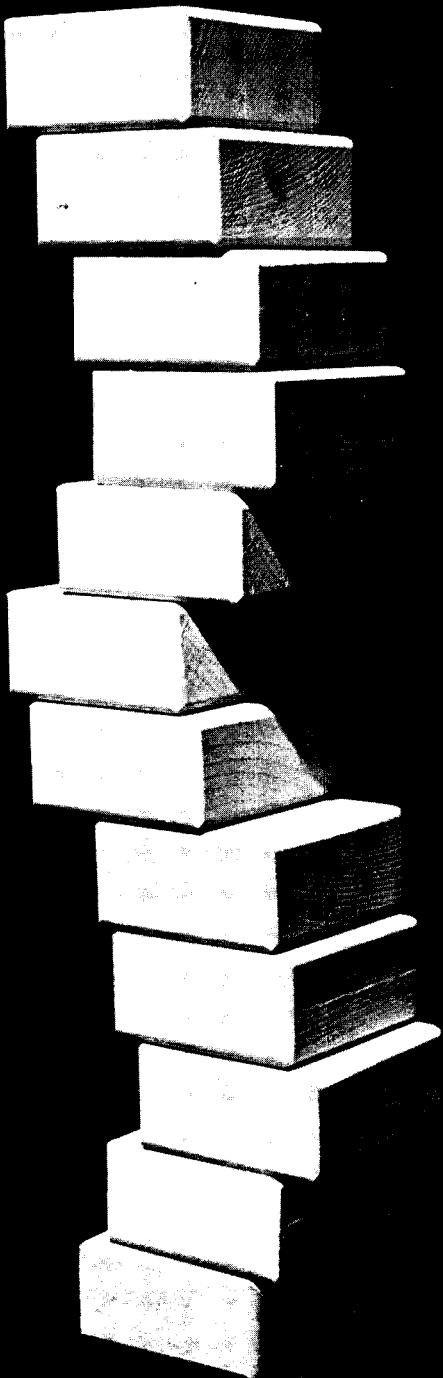
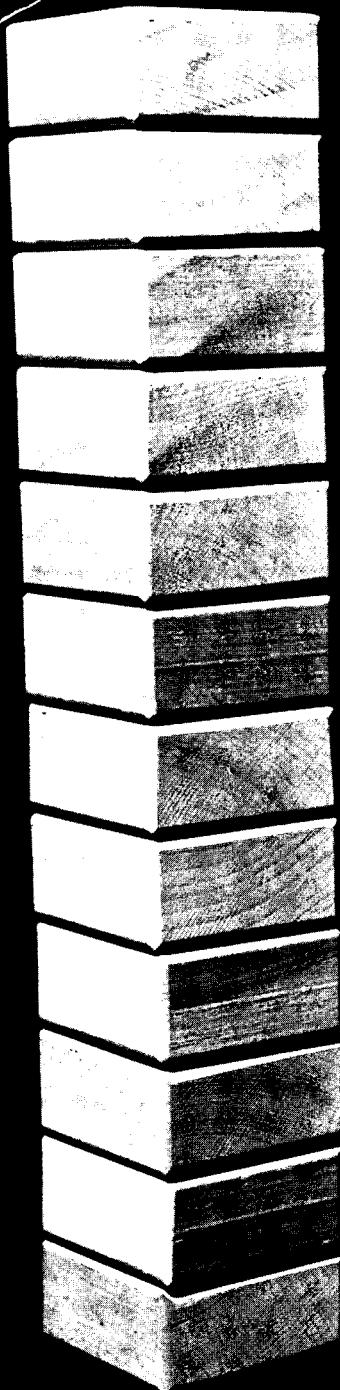
The human body is planned to remain upright with a minimum outlay of energy. The various bones mutually support each other. The organs fall naturally into proper place. The muscles and ligaments have an easier time holding the structure together. Whether standing or sitting, walking or running, energy is saved.

The next time you are reminded of good posture think of these blocks. That doesn't mean that good posture is "wooden." It means that good posture is the most sensible way to keep your body erect.

It means holding your body in a way that makes it "self-supporting," without waste of energy, and with less strain on bones, muscles, ligaments, and organs.

It means making the most of your appearance. Standing or sitting with poise and grace, walking or running with perfect control.

It means you're in the Army—and proud of it.



WHICH OF THESE WOMEN IS YOU?

HERE is the same posture principle you saw expressed in wooden blocks. But this time it is expressed by the human body.

These pictures are interesting. Study them for a moment. In which do the clothes drape more smartly? In which does the girl seem smarter, more alert, more military? In which does the bone structure seem to be more firmly posed? In which do the organs seem to have more room to function efficiently? Which of these girls would you rather be?

Actually, the girl at the left is exactly the same as the girl at the right. But in one instance her posture is good. Her head is balanced and erect. Her shoulders are relaxed and low. Her chest is held high. Her lower back is only slightly curved. Her abdomen is flat. Her hips are tucked under. Her knees are straight but not stiff. Her weight is toward the outer borders of the feet.

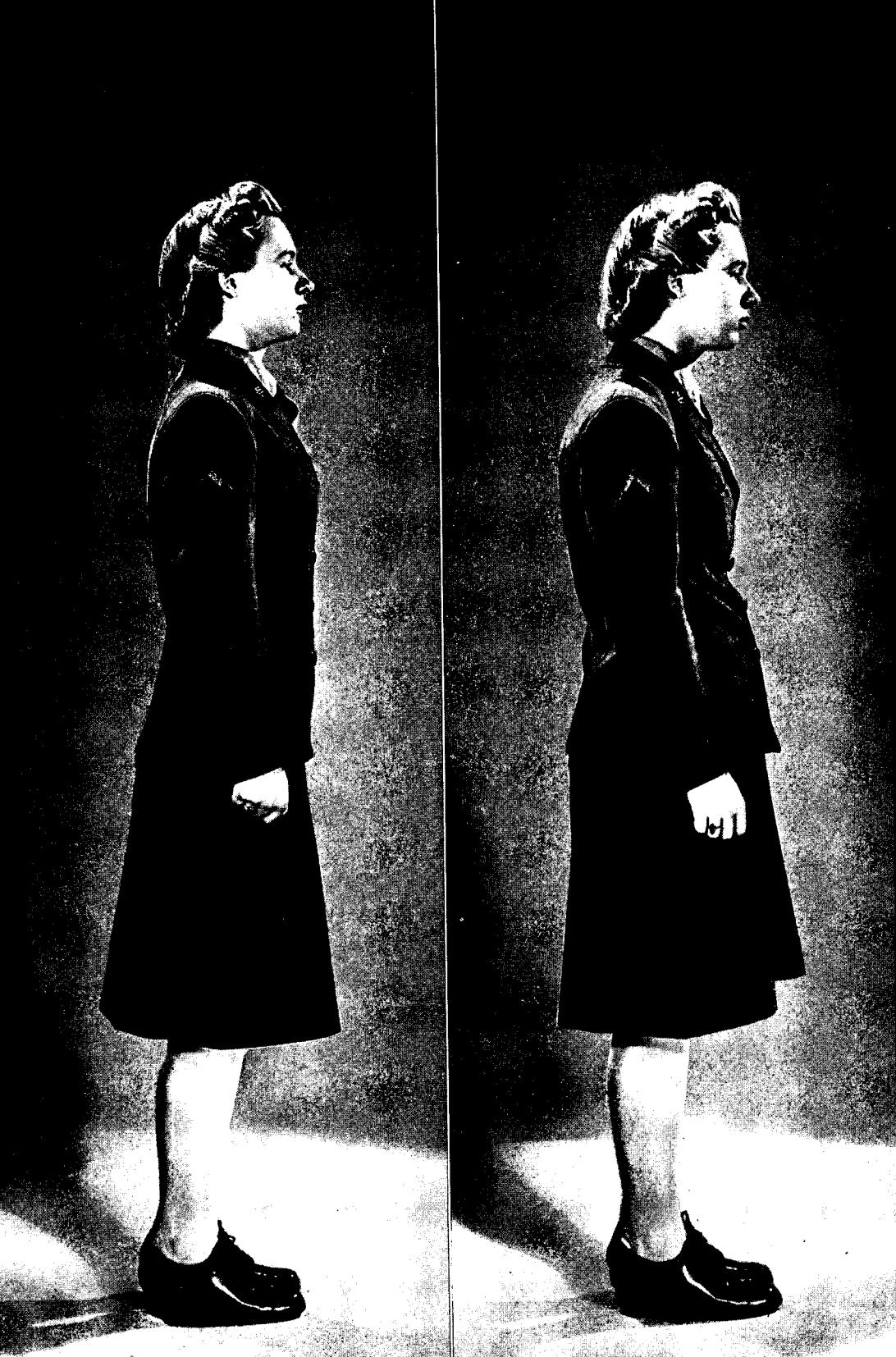
Now look at this girl droop into sloppy posture. Her head and neck fall forward. Shoulders are round. The back is hollow. Her chest is sunken. Buttocks and abdomen protrude. Her knees are locked, stiff. Her weight is on the inside borders of the feet, with ankles protruding inward.

Your body can assume a variety of postures. Another common fault, for example, is the overexaggerated military posture in which shoulders are held too far back. The spine is overly arched. Knees are locked and buttocks are thrown back. On page 24 are pictures of this posture at parade rest, and a salute.

Remember: In standing, only one posture is correct. It is the one at the left. You can test good posture with the "plumb line" test:

THE "PLUMB LINE" TEST

Drop a weighted string from a point opposite the middle of your ear. It should fall opposite the middle of the shoulder, hip, and knee. The weight should come to rest slightly in front of the ankle bone. One more point to watch: the toes should be pointed straight ahead when not at the military position of "attention."





THIS IS CORRECT SITTING POSTURE

THIS woman sits well back on the seat of the chair. Her feet are flat on the floor. She keeps the upper part of her body in a straight line. Note her straight back and flat abdomen. Note how gracefully she carries her head. She bends forward from the hips—not waist.

Before sitting, remember this hint: stand close to the chair with one foot in front of the other. Don't "search" for the seat. Keep the body erect and the hips tucked under as you bend your knees to sit down.



THIS SITTING POSTURE IS INCORRECT

MANY women sit this way, with head and neck forward, shoulders rounded, back curved, chest flat, abdomen protruding. They look tired and, doubtless, they feel tired, for in this position the head lacks support. The bones, instead of resting firmly on each other, go off at angles. Muscles and ligaments are strained to keep matters under control. The organs are cramped. After a time, fatigue sets in and the weary body practically "lies down" while sitting.

RIGHT



WRONG



WALKING: Movement starts at hips, not knees. Hold the upper body and head at right angles to the ground. Swing arms freely. Keep eyes off the ground. Point toes straight ahead. Heels touch the ground first. Transfer weight forward toward the outer borders of feet and push off with the toes. Grasp with toes for balance. Don't hold body and head at an awkward angle (below). Avoid swaying hips from side to side. Don't lock knees.

RIGHT



WRONG



RUNNING: Bend forward slightly from the waist. Bend elbows slightly and clench hands lightly. Legs reach out directly to the front. Push off with the toes and vigorously extend back leg to assist forward motion. Don't hold body too erect (below). Keep legs from moving up and down and covering very little space. Avoid kicking feet up behind you. Note how woman below requires four distinct motions to move over the ground covered by the woman above in three.

WRONG



WRONG



EVERYDAY POSTURE POINTS

DO YOU salute this way? If so, snap out of it. This is bad military form, and it is bad posture. When you salute, bring your hand to your forehead—not your forehead to your hand. Relax. Don't stiffen or arch your back. Don't throw out your hips.

Do you stand at **PARADE REST** this way? If so, check up. This woman has snapped her knees back and locked them. Her hips serve as a shelf to rest her hands. This is bad posture and bad military form. **PARADE REST** is simply good standing posture, with the feet in stride position, and the hands held easily, comfortably behind the back.

How do you climb stairs? The right way is shown above. This woman keeps her body erect. She places her foot on the step and straightens the knee to lift her body. She swings the opposite leg into position on the next step. Arms swing naturally. She raises herself by leg action, assisting her upward movement by a vigorous thrust of the toes.

Below, a woman climbs stairs the hard way. Knees are continually bent. Her trunk leans forward. She comes down flat-footedly on each step.

Watch these and other everyday posture points. The Army will judge you by your appearance. A smart, soldierly carriage usually means smart, soldierly performance.

RIGHT



WRONG



CHECK YOUR POSTURE

THE PLUMB LINE test for posture has been mentioned before. Try your knowledge on this figure. Use your knowledge on the woman next to you in ranks. Try it on yourself in front of a mirror. Stiff posture is not good posture. Good military posture is no different from good civilian posture.



HEAD BALANCED AND ERECT

CHEST HELD HIGH

BACK STRAIGHT

ABDOMEN IN

HIPS DO NOT PROTRUDE

KNEES STRAIGHT BUT NOT STIFF

WEIGHT TOWARD OUTER BORDERS OF FEET

POSTURE CHART

NAME																			
DATE																			
HEAD																			
SHOULDERS																			
ABDOMEN																			
HIPS																			
KNEES																			
FEET																			
WEIGHT																			
GENERAL APPEARANCE																			

LEGEND: A=EXCELLENT B=GOOD C=FAIR D=POOR

THIS CHART is a sample of a group chart for checking posture, but it can easily be adapted as an individual record. The purpose of the chart is to keep a consistent record of the woman's posture as an incentive to correction. As such, it should be used as often as possible. The chart is better used when the person is not aware of observation. She should, however, know the results of the check so that she may use it as a guide to improvement. Good posture is the reward of day-in, day-out vigilance.

BEGIN WITH CADENCE EXERCISES

WARM-UP

BEFORE you run your car it's a good idea to warm up the motor. Before you exercise it's wise to "warm up" your body.

The cadence exercises which follow are "warmer-uppers." They are especially planned to prime your heart, muscles, and circulatory system for a step-up in activity. Gradually, easily, they get your body set for the big job ahead. Pitchers warm up before going to the box. Runners jog around the track before a race. Basketball players shoot baskets before the opening whistle. It's all for the same reason—to "warm up the motor."

FLEXIBILITY

Cadence exercises also develop flexibility. They limber up the joints—give them the full range of movement on which grace and smoothness depend. To appear your best, and to work your best, you must be supple. Without this quality, simple everyday tasks—like lifting, carrying, climbing, and jumping—become difficult. Lack of flexibility is fair warning of advancing age.

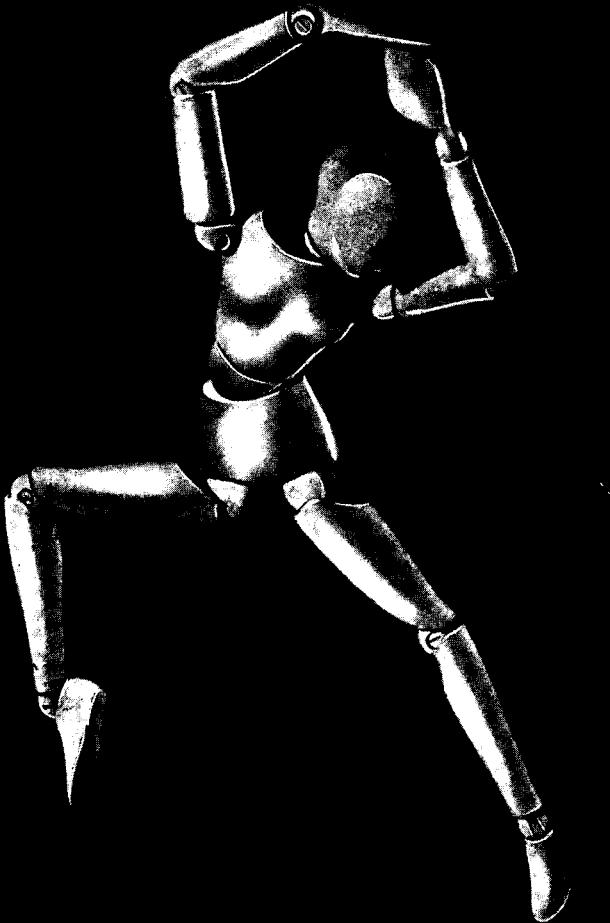
CONTROL

Cadence exercises develop control. They give you the knack of controlling other sections of the body while one part is in action. This control is reflected in better posture, in work and play. When performed by a group, cadence exercises develop coordination between body and mind.

RELEASE OF MUSCLE TENSION

Cadence exercises help to release muscle tension. The typist whose upper back and neck ache because she has held one position too long will find the cadence series helpful in relieving tension.

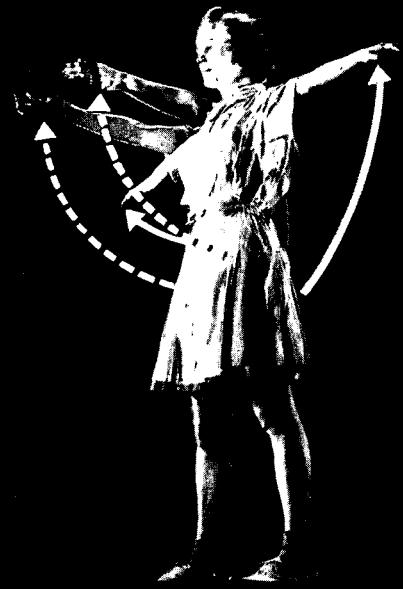
Later on you will learn more about the benefits of cadence exercises—in "Release of Tension Activities." For the present remember that the cadence series put you into gear for an uphill pull.



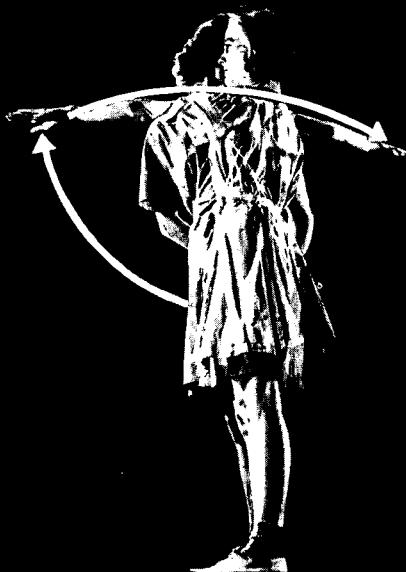
CADENCE EXERCISES

CADENCE SERIES 1 IS SIMPLEST

1



2



SWING

Arm swinging forward and sideward

FLING

Single arm swinging forward and flinging back

HEAD

Head lowering forward and backward

SHOULDERS

Shoulder hunching

3



4



SERIES OF WARMER-UPPERS

5



TRUNK

Trunk springing forward and stretching upward

6



LEGS

Bouncing

COUNTS FOR CADENCE SERIES 1

SWING *Forward and side and
2 and side and
(and up to)
7 and side and
Circle, circle*

SHOULDERS *Up and 2 and
(and up to) 8 and
(Repeat right)
(Repeat left)
(Repeat alternately)*

FLING *Forward fling forward down
(and up to)
4 fling forward change
right fling forward down
(continue)*

TRUNK *Relax 2 3 4 Up 2 3 4
2 — 2 3 4 Up 2 3 4
(and up to)
7 — 2 3 4 Up 2 3 4
8 — 2 3 4 Up 2 3 Turn*

HEAD *Forward and back and
2 and back and
(and up to)
7 and back and
8 up*

LEGS *Bounce 2 3 4
Turn 2 3 4
(continue)
Turn 2 3 4
Turn 2 and stop.*

DIRECTIONS FOR CADENCE SERIES 1

Starting position: Stride standing.

Arm swinging forward and sideward. Swing arms forward to shoulder level. Swing arms down to starting position. Swing arms to side at shoulder level. Swing arms down to starting position. *Directions:* These four swings are performed in a continuous movement for seven times. The hands brush the skirts as they pass through the starting position. *Transition:* Circle arms forward, up, back, and down twice and place right arm behind back.

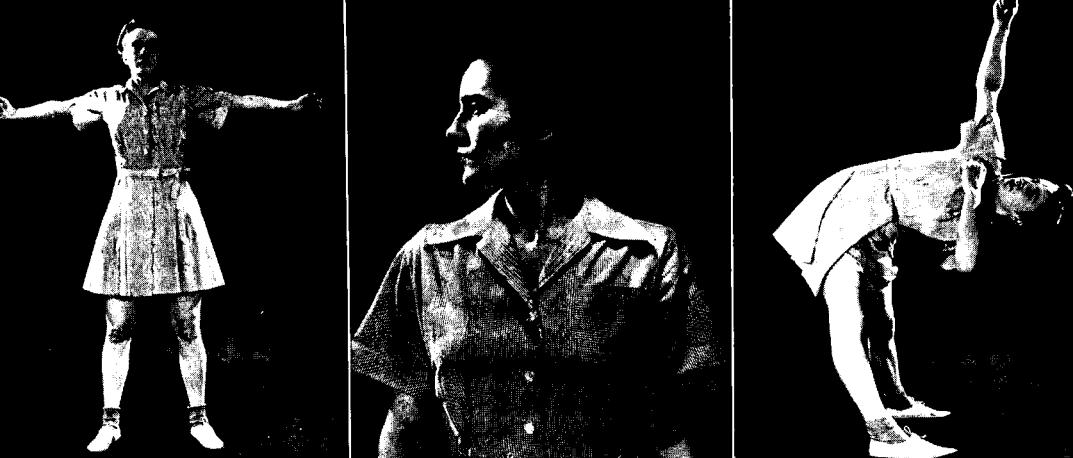
Single arm swinging forward and flinging back. Swing the left arm forward to shoulder level. Fling the left arm at shoulder level as far toward the back as possible. The upper body twists to the left as the head follows the action of the left arm. Swing the left arm forward to shoulder level. Swing the left arm down to starting position. *Directions:* These four movements are performed as one continuous movement. The swinging arm should not drop below shoulder level on the fling. The action is performed 4 times with the left arm and repeated 4 times with the right arm, 4 with left, 4 with right. The change to use the right arm is accomplished on the last swing by placing the left arm behind the back and beginning the movement with the right. *Transition:* Arms at sides.

Head lowering forward and backward. Drop head forward to chest. Lift head to normal position. Drop head backward. Lift head to normal position. *Directions:* These four movements are performed as two movements; a forward drop followed by a backward drop of the head. They are repeated 8 times. *Transition:* Head returns to normal position.

Shoulder hunching. Lift shoulders up as far as possible. Relax shoulders. *Directions:* These two movements are performed consecutively for 8 times. Repeat movement using only the left shoulder for 8 times. Repeat movement using only the right shoulder for 8 times. Repeat movement alternating left and right shoulders for 8 times. *Transition:* Shoulders in normal position.

Trunk springing forward and stretching upward. Bend the trunk down as far as possible. Without rising to an upright position, pull the head and trunk farther down with a bobbing motion 4 times. Roll the trunk up to an erect position in four counts. *Directions:* These movements are performed consecutively for 8 times. *Transition:* As the body is raised to the starting position the last time, make a quarter turn left and bring feet together.

Bouncing. Small bounces in place. (1) Bend knees slightly. (2) Push from toes. (3) Bounce a few inches off the floor. *Directions:* Four bounces in each direction making a quarter turn left after every fourth bounce until you are facing the front. Repeat, turning to the right until you are again facing front. *Transition:* The series ends in erect standing position facing original direction.



ARM FLING

HEAD TURNING

TRUNK TWISTING

DIRECTIONS FOR CADENCE SERIES 2

Starting position: Stride Standing, right hand behind back.

Single- and double-arm circling. Swing left arm in a circle, forward, up, back, and down six times. Swing arms forward to shoulder level. Swing arms down to starting position and place left arm behind back. Swing right arm in a circle, forward, up, back, and down six times. Swing arms forward and down. Swing both arms in a circle, forward, up, back, and down six times. *Directions:* The left arm is circled 6 times. Change with forward and down swing. The right arm is circled 6 times. Change with forward and down swing. Both arms are circled 6 times. *Transition:* Swing arms forward to shoulder level. Swing arms down to starting position.

Double-arm swinging forward and flinging sideward. Swing arms forward to shoulder level. Fling arms to the side and back as far as possible, keeping arms at shoulder level. Swing arms forward to shoulder level. Swing arms down to side. *Directions:* These four movements are performed consecutively for eight times. *Transition:* Stride standing, arms at side.

Head turning. Turn the head as far as possible to the left. Turn the head as far as possible to the right. *Directions:* Repeat consecutively eight times. *Transition:* Head returns to normal position.

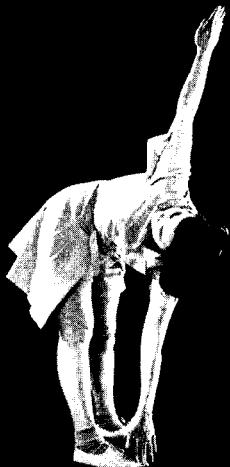
Shoulders backward and forward. Pull shoulders back as far as possible. Pull shoulders forward as far as possible. *Directions:* Repeat consecutively 8 times. *Transition:* Bend trunk forward, arms hanging toward ground.

Trunk twisting and arm flinging. Fling arms up to left; at same time, twist upper body to left. Fling arms up to right; at same time, twist upper body to right. *Directions:* Keep trunk bent forward. Repeat consecutively 8 times. *Transition:* Return to erect standing making a quarter turn left.

Stride jumping. Jump to a stride position. Jump with feet together. *Directions:* Repeat consecutively. On the fourth jump, make a quarter turn to the left. Repeat this until you face your original direction. Repeat whole series, making quarter turns to the right until you face your original direction. *Transition:* The series ends in erect standing, facing original direction.



ARM FLING



BENT OVER AIRPLANE



JUMPING JACK

DIRECTIONS FOR CADENCE SERIES 3

Starting position: Stride Standing.

Arm swinging forward, sideward, and circling. Swing arms forward to shoulder level. Swing arms down to starting position. Swing arms to side at shoulder level. Swing arms down to starting position. Swing arms in a circle twice, forward, up, back, and down. *Directions:* The first four swings are done in a continuous movement. The hands brush the skirt as they pass through the starting position. Perform all these movements consecutively for eight times. *Transition:* At the end of the eighth count, bring the feet together.

Double-arm swinging forward and flinging up with leg lift. Swing arms forward to shoulder level. Swing arms down to starting position. Fling arms forward and up over head strenuously; at same time, lift one knee as high as possible. Swing arms down to starting position; at same time, lower leg to starting position. *Directions:* These four movements are done consecutively for eight times. Knees should be lifted alternately. *Transition:* Stride standing.

Head circling. Drop the head to the left. Roll the head in a circle to the left. *Directions:* The head is rolled to the left four times and then to the right four times. *Transition:* Head returns to normal position.

Shoulder circling. Circle the shoulders forward, upward, backward and downward. *Directions:* Make seven complete circles. *Transition:* Extend the arms sideward at shoulder height. Bend the body forward to a right angle position.

Bent over airplane. Touch the left toe with the right hand. Touch the right toe with the left hand. *Directions:* These two movements should be done rapidly eight times. The upper body is twisted to perform the movement. The free hand is pointed toward the ceiling. The head is turned to look at the free hand. *Transition:* Jump to erect standing.

Jumping jack. Jump to a stride position and clap hands over head. Jump to erect standing position, arms at side. *Directions:* These movements are performed for eight times. *Transition:* The series ends in erect standing position.



ARM THRUST



STRETCHING



RUNNING

DIRECTIONS FOR CADENCE SERIES 4

Starting position: Stride Standing.

Alternate arm swinging forward and sideward: Swing left arm forward shoulder level; at same time swing right arm sideward shoulder level. Swing arms down to starting position. Repeat alternating movement. Swing arms down to starting position. *Directions:* Perform rhythmically for 8 times. *Transition:* Swing both arms down to side.

Arm swinging and elbow flinging. Swing arms forward shoulder level. Bend arms, pull elbows back keeping them shoulder height. Thrust arms forward shoulder height. Swing arms down to starting position. Swing arms up over head. Bend arms, pull elbows down and back. Thrust arms up over head. Swing arms down. *Directions:* Perform 8 times. *Transition:* Arms at sides.

Head swinging and circling. Swing head forward to left in half circle. Swing head forward to right in half circle. Swing head in complete circle and half to the left. Repeat, starting right. *Directions:* Perform rhythmically 4 times. *Transition:* Head to normal.

Alternate shoulder circling. Circle left shoulder forward, up, back, and down. As left shoulder starts back, circle right shoulder forward, up, back, and down. *Directions:* Perform rhythmically 8 times. *Transition:* Extend both arms over head, drop head back to look at hands.

Alternate trunk stretching and bouncing. Stretch left arm up. Relax to starting position. Stretch right arm up. Relax to starting position. Bend trunk down. Without rising to upright position, pull head and trunk farther down in bobbing motion 4 times. Return to starting position. *Directions:* Perform consecutively 4 times. *Transition:* Jump to erect standing position, arms bent.

Running. Running in place. *Directions:* Arms bent to comfortable position. Legs lifted high in front, toes pointed. Gradually increase length and speed of run. *Transition:* Series ends in erect standing position.

COUNTS FOR CADENCE SERIES

SERIES 2

SWING Circle 2 3 4 5 6 forward down
 Right 2 3 4 5 6 forward down
 Both 2 3 4 5 6 forward down

FLING Forward fling forward down
 2 fling forward down
 (and up to)
 8 fling forward down

HEAD Left right
 2 and
 (and up to)
 7 and
 8 front

SHOULDERS Backward forward
 2 and
 (and up to)
 7 and
 8 bend

TRUNK Left right
 2 and
 (and up to)
 7 and
 turn down

LEGS Apart together, apart turn
 Apart together, apart turn
 (continuing)
 Apart together, apart turn
 Apart together and stop

SERIES 3

SWING Forward side circle circle
 2 side circle circle
 (and up to)
 7 side circle circle
 8 side circle circle

FLING Forward and left and
 2 and right and
 (and up to)
 7 and left and
 8 and right apart

HEAD Round and Right and
 2 and 2 and
 3 and 3 and
 4 change 4 up

SHOULDERS Circle and
 2 and
 (and up to).
 7 and
 Bend over

TRUNK Left right
 2 and
 (and up to)
 7 and
 8 jump

LEGS Apart together
 2 together
 (and up to)
 7 together
 and stop

SERIES 4

SWING Swing and
 2 and
 (and up to)
 7 and
 8 and

FLING Forward pull thrust down
 Up pull thrust down
 (and up to)
 8 pull thrust down
 Up pull thrust down

HEAD Left and right and
 Circle around
 (continuing)
 Right and left and
 Circle around

SHOULDERS Left right
 2 and
 (and up to)
 7 and
 8 up

TRUNK Left and right and
 Relax 2 3 4
 (and up to)
 4 and right and
 Relax 2 3 jump

LEGS Left right
 3 4 5 6 7 8
 2—2 3 4 5 6 7 8
 3—2 3 4 5 6 7 8
 4—2 3 4 5 6 7 8



WOMEN WITHOUT UNIFORMS

NOT all women in war wear uniforms. Some, like these Russians outside Moscow, dig the trenches and tank barricades that helped to turn back the Germans. Others labor in factories, in ships, in mines, and in the fields. War, to these women, is neither glamorous nor exciting. It is a fight for existence. It is a bitter fight without end.

Fighting uniforms do not make fighting women. It is the heart and hardihood beneath the khaki or olive drab that helps to win wars. In the tough backs and flexible sinews of these simple peasants is the stuff of which victory is made. On the steel which you build into your body will your contribution to victory largely depend.

HOW TO DEVELOP SHOULDER STRENGTH

EVERYBODY has muscles. Some women's muscles are weak and flabby—like rubber bands that have been around too long and lost their snap.

Other women have strong muscles—like fresh rubber bands, with plenty of stretch and pull.

Weak or strong, the length and thickness of rubber bands are about the same. And it's the same way with muscles. To be strong, you needn't have muscles that bulge. You need muscles with elasticity and tone—lithe, energy-packed muscles that get the job done.

To understand the muscles of your chest and shoulders, study the little manikin. The muscle in front of the chest is called the pectoralis. It joins up the breast bone, the collar bone, and the arms. Any work you perform in front of your body—jobs like lifting, pushing, reaching, driving, typing, stirring—would use the pectoralis. It must therefore be strong and firm, and when it is you'll notice a difference in your appearance. A firm pectoralis gives you a straighter line from collar bone to breast.

The muscle on the tip of the manikin's shoulder is the deltoid. It joins the arm to the shoulder. Every time you move your arms you call on your deltoid muscle. Whatever your job, you'll be using it all the time.

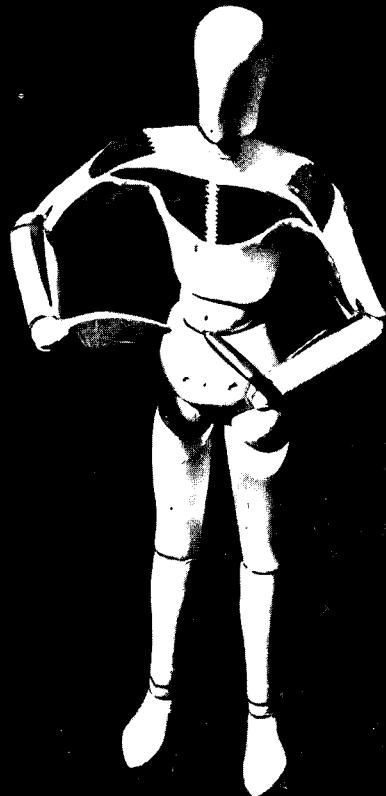
The muscles in the arm are called the biceps and triceps. When you bend your arm you use your biceps. To straighten it out you use the triceps. For carrying heavy objects or handling light objects over a period of time you rely on these muscles. No matter what you will be doing, well-conditioned biceps and triceps are important allies in doing your job.

How can you condition your pectoralis, deltoid, biceps, and triceps muscles? By the brief, simple series of planned exercises explained on the following pages.

What will these exercises do for you? First, they will systematically add to your strength and endurance.

Second, they will improve coordination between these and other parts of your body, and between these muscles and the brain. You will work more easily and efficiently.

Third, they will give chest, shoulders, and arms a firm contour.



SHOULDER AND ARM EXERCISES

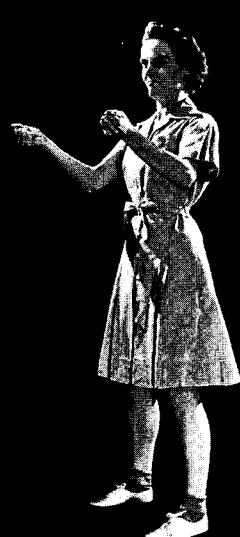
MASTER EACH EXERCISE BEFORE



1A



1B



1C

IMAGINARY PUSH AND PULL. Stride position, elbows bent close to body, palms at shoulder height, push slowly and firmly outward to full arm extension. Clench fists, pull arms back to starting position with same type of resistance. Avoid body movement. Use all muscles of arm and shoulder.



2A

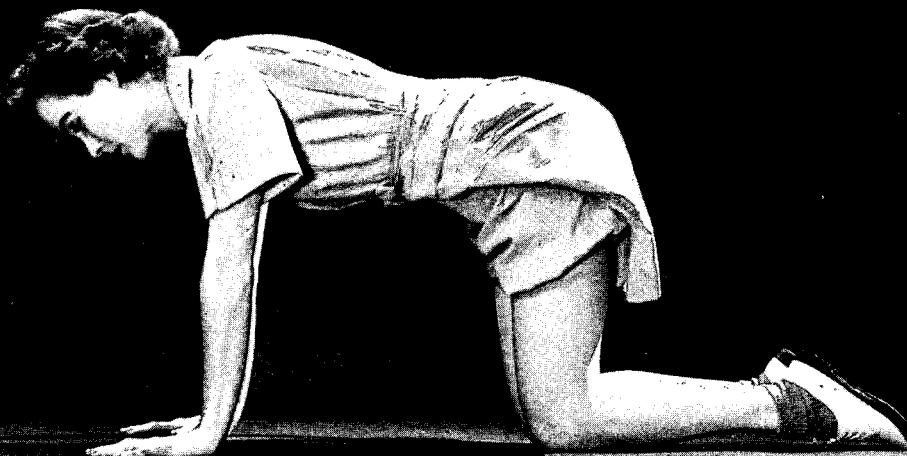


2B

PARTNER DIP. Assume position as in *A* above, heels of hands together, arms extended at shoulder height. *B* lowers herself by bending elbows and leaning from ankles. Keep body in straight alignment from head to heels while lowering. Return to position. *A* is used only as a support for *B*.

PROGRESSING TO THE NEXT

3A



3B



ALL FOURS DIP. On hands and knees with hips directly above knees and shoulders directly above hands. Slowly bend elbows to permit the chin to touch the ground between the hands. No other part of the body should touch the ground. Keep the back flat. Slowly straighten the elbows to return to starting position. Repeat several times. To make the exercise more difficult, make the distance between the hands and knees greater and repeat the same movement making sure that the chin touches the ground between the hands. It is essential that you master this exercise.

LEARN TO CONTROL YOUR BODY



4A



4B

LET DOWN. In prone fall position, lower the body slowly to the ground by bending the elbows. Relax. Assume starting position by shifting weight back to knees. Straighten knees and assume prone fall position again, ready to repeat the exercise. Keep the body in a straight line while lowering. Do not allow the hips to sag. Work for as slow and controlled a descent as possible.



5A



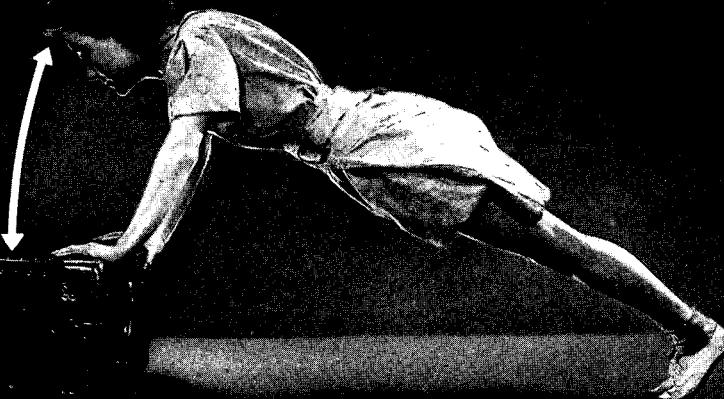
5B

KNEE DIP. Lie face down on the ground with knees bent and feet up toward ceiling. Hands should be placed just outside the shoulders ready to push body up to supported position. Straighten elbows and push body up to a supported position resting on hands and knees. Slowly bend the elbows to return to the starting position. Repeat this exercise several times. Do not allow the hips to sag.

MAKE IT DO AS YOU BID AT ALL TIMES

YOU are now reaching the point where it is important that you progress only within your ability to perform correctly. Much can be gained by thorough mastering of every exercise. Much will be lost by hastening the progress unduly and jeopardizing the accomplishment of the end result. You should now be well aware of the muscles involved in the performance of these exercises. It is not the ability to do *these* activities that is important to our work and your future; it is the actual muscle tone which is developed that will translate itself into your success in many other activities.

6A



6B



HALF DIP. Prone fall position, with hands grasping edge of chair, foot locker or shoulders of a person on all fours. Lower body slowly by bending elbows until chest touches support. Push back to starting position. Repeat. Begin by lowering only as far as possible, still being able to assume starting position in the form described above. Do not allow hips to sag nor knees to bend.

BE ABLE TO DO THIS EXERCISE

7A



FULL DIP. Assume prone fall position. Hands should be at least shoulder distance apart and fingers may be pointed either forward or to the side. Lower the body very slowly only as far as it is possible to go and still return without relaxing, to the starting position. Repeat this exercise as many times as possible. Increase the distance of the dip more and more until it is possible to touch the chin to the floor and still return without relaxing to the

starting position. It is important to keep the body in a straight line from head to heels and keep the hips from sagging when doing the exercise. Having once mastered the ability to perform a full dip correctly, work for an increase in the number of consecutive dips you can perform. This is the last exercise in the shoulder strength progression and as such appears in the daily exercise series on page 88.

7B





ABDOMINAL EXERCISES

THIS manikin displays a "girdle"—an abdominal girdle of muscle which every woman wears under her skin. It is built through planned, progressive exercise. Properly maintained, it lasts a lifetime. It aids in keeping the internal organs in correct position. It keeps the abdomen flat and firm. It is essential to correct military posture. Few women have it. Yet a few exercises, graduated according to your ability, make it a simple matter to acquire sound muscular tone in this vital area. Regular care keeps the tone alive.

THESE EXERCISES TONE THE

1



STARTING POSITION FOR ALL ABDOMINAL EXERCISES. Lie on back with hands on top of upper leg. The hands are placed in this position in order to keep the elbows off the ground. The arms should be relaxed so that the hands may slide toward the knees as the head and shoulders lift up.

2



ONE LEG PLEADING. Raise head and shoulders off the ground to look at left leg which is raised about eight inches from the ground. Hold position. Relax and repeat the exercise, using the right leg. Do not attempt to sit up. The hands should slide toward the knees as the shoulders are lifted.

4



TWO LEG PLEADING. Raise head and shoulders off the ground to look at both legs which are raised about 8 inches from ground. Hold position. Relax. The hands should slide toward the knees as the chest lifts. May be used as a test by counting number of performances done consecutively.

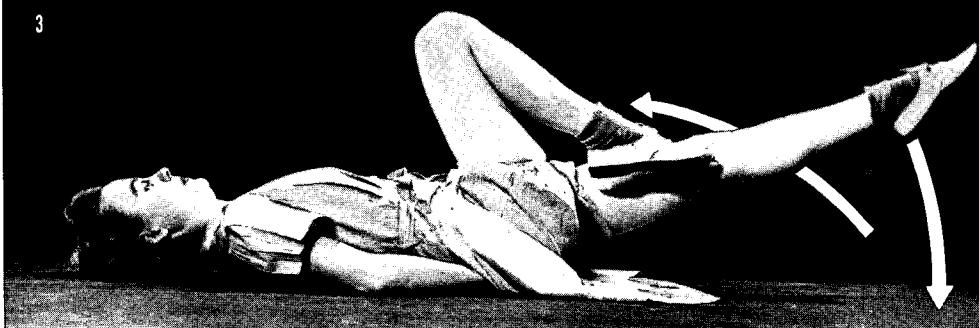
IMPORTANT ABDOMINAL MUSCLES

1A



PLEADING. Raise only head and shoulders off the ground and look toward the feet. Do not attempt to sit up. Hold position. Relax and repeat the exercise. The hands should slide toward the knees as the chest is lifted. Increase the number of times the exercise can be performed consecutively.

3



ONE LEG LOWERING. Lie on back with both knees raised to chest, hands placed in comfortable position under hips or lower back for support. Stretch left leg toward ceiling with knee straight. Lower left leg slowly to the ground with heel leading. Bend leg to chest. Repeat with right leg.

5



SIDE PLEADING. Raise head and right shoulder off ground, keeping left shoulder as nearly in position as possible. Hold position. Relax and repeat the exercise. The arms should remain relaxed and should slide toward the knees. Only one shoulder should be off the ground at one time.

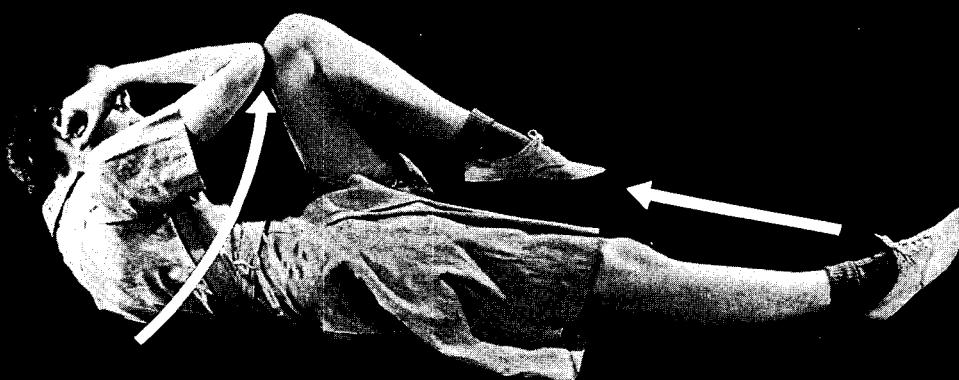
MORE DIFFICULT EXERCISES FOR ABDOMINAL

6



SIDE PLEADING WITH ONE LEG LIFT. Lift head, right shoulder, and left leg from ground. At the same time, touch the left knee with the right hand. Hold position. Relax. Repeat, using opposite arm and leg. Keep left shoulder down. The arms should remain relaxed throughout the exercise.

7



OPPOSITE KNEE TO ELBOW. Raise head and right shoulder off ground and bring left knee up toward chest. Bend right elbow and move it across body to touch left knee. Hold position. Relax. Repeat, using opposite arm and knee. The emphasis should be placed on very vigorous body twist.

STRENGTH

TIMING. The position in each abdominal strength exercise should be held at least 2 seconds the first time it is attempted. This time should be gradually increased until the individual has the ability to hold her position for at least 10 seconds. The number of times the exercise is performed should be gradually increased up to 20 times or more.



8B



8C



SIT-UPS. Sit on the floor with knees bent, feet flat on floor and as close to hips as comfortable. Keeping feet in place, lie down. Raise body to sitting position without moving feet. Return to lying position. Repeat.

The exercise may be made progressively more difficult by changing the position of the arms. Use arms overhead, then use with arms at sides as shown in illustration. The action may then be started with hands behind the head. The number of times the exercise is performed should be increased as the abdominal muscles increase in strength. It is possible to see a day by day improvement by keeping count of the number of sit-ups you can do consecutively.

This is the last exercise in the abdominal strength progression and as such is included in the daily exercise series. By this time, your abdominal muscles should be fairly strong. Occasionally, review the more simple exercises, particularly those involving the oblique abdominal muscles. The sit-up will keep your abdominal muscles in good tone, but the oblique abdominal muscles can be reached better through the use of a side pleading and the opposite knee to elbow lift.

IMPORTANT POSTURE BUILDERS

YOUR body may or may not be in perfect balance. One of the purposes of planned exercise is to develop or preserve this balance. When you exercise one set of muscles it is necessary to develop the opposing set of muscles to an equal degree. This results in perfect harmony and coordination among various parts of the body.

This is particularly true of the back and neck muscles. This set of muscles acts in opposition to the chest muscles. To achieve correct position you must balance the strength in these two sections.

KNOW YOUR BACK MUSCLES

Study the manikin for a moment. That large muscle attached on either side of the spine from the neck, reaching halfway down the back, is the "trapezius." It is attached to the collar bone and the tip of the shoulder blades. When this muscle lacks tone the shoulders tend to fall forward. Result: round shoulders.

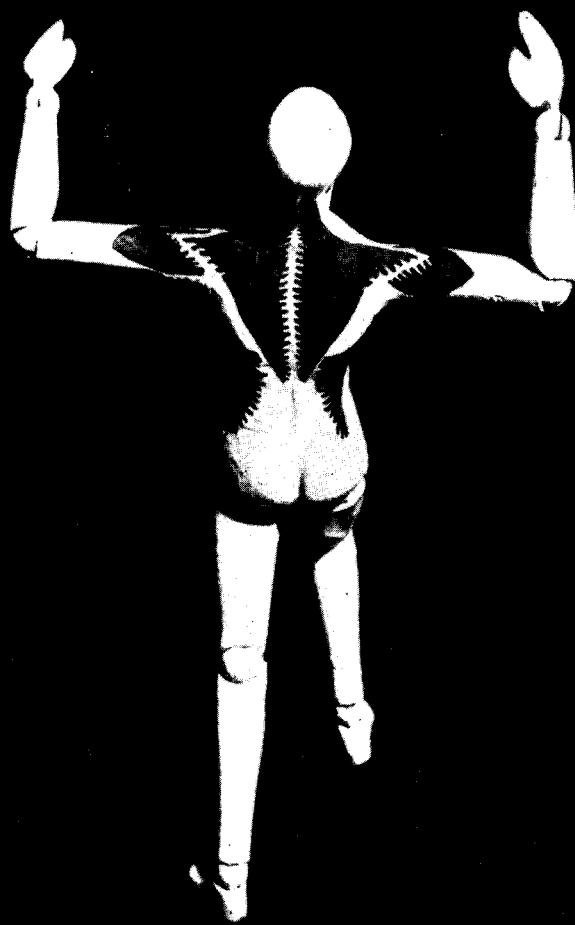
Beneath the trapezius muscle are other muscles which work to keep the shoulder blades close to the spine and ribs. When these muscles are flabby the result is an irregular back—caused by shoulder blades that stick out like wings.

BACK MUSCLES HELP YOU STAND ERECT

Other muscles running up and down the spine keep the spine erect. When they're strong, you stand erect. When they're weak, you slump. The muscles of the neck and upper back function to keep the head in a balanced position. When the head is carried in a forward position these muscles are badly strained. This habit may, in its worst form, cause neckaches and headaches. It is important to develop a proud and erect carriage of the head. First, for reasons of health; second, for an attractive appearance.

PLANNED EXERCISE DEVELOPS BACK MUSCLES

The back muscles are important in nearly everything you do. They function whenever the shoulders are drawn back, whenever you draw up your trunk in an erect position, whenever you bend over and straighten up. They are important posture builders. Develop these muscles.



BACK AND NECK EXERCISES

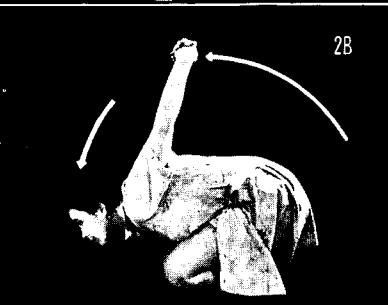
ARMY TASKS DEMAND THAT YOU



1



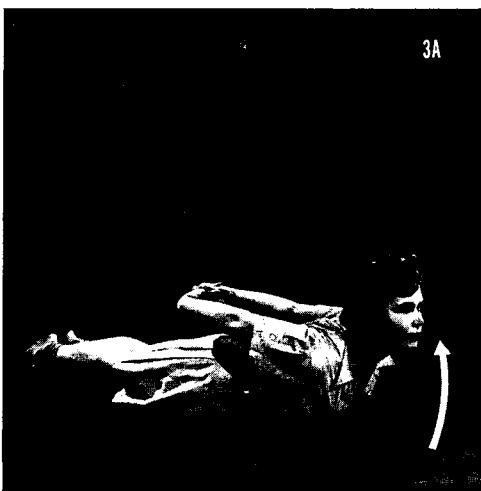
2A



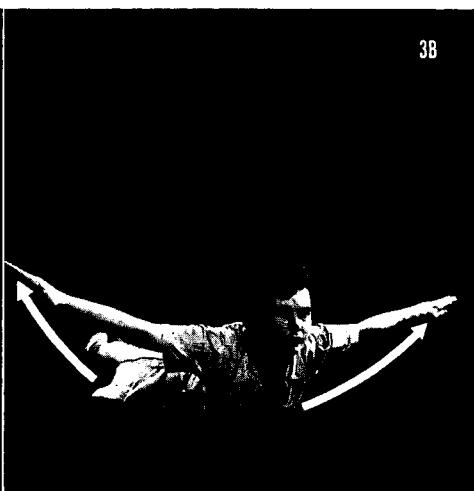
2B

ARM PULL BACK. Assume position shown above. Move hands and arms slowly as far back from body as possible. Relax. Repeat. Keep hips tucked under.

PRAISE ALLAH. Kneel to sit on heels. Clasp hands behind back with arms straight. Slowly bend body to touch chest to knees while moving hands and arms back and up away from body. Keep your head and your eyes well up. Return to starting position and repeat.



3A

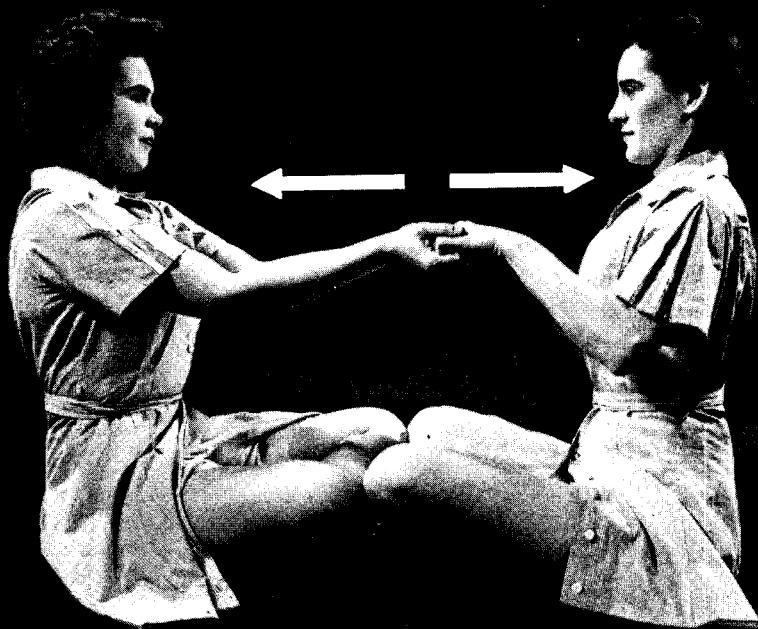


3B

HALF SWAN. Lie on face, hands clasped behind hips. Lift hands, arms, head, and shoulders as high as possible. Hold position. Relax. Repeat. The same action may be made more strenuous by changing starting position to that shown above—with arms at shoulder height. Do not strain lower back.

HAVE STRONG BACKS AND NECKS

4



CROSS-LEGGED PULL. Assume position shown above. *A* pulls against *B*'s resistance until arm positions are reversed. Then *B* pulls with *A* resisting to return to starting position. Avoid body movement. Keep hands at shoulder height throughout. Use knees to brace against partner during pull.

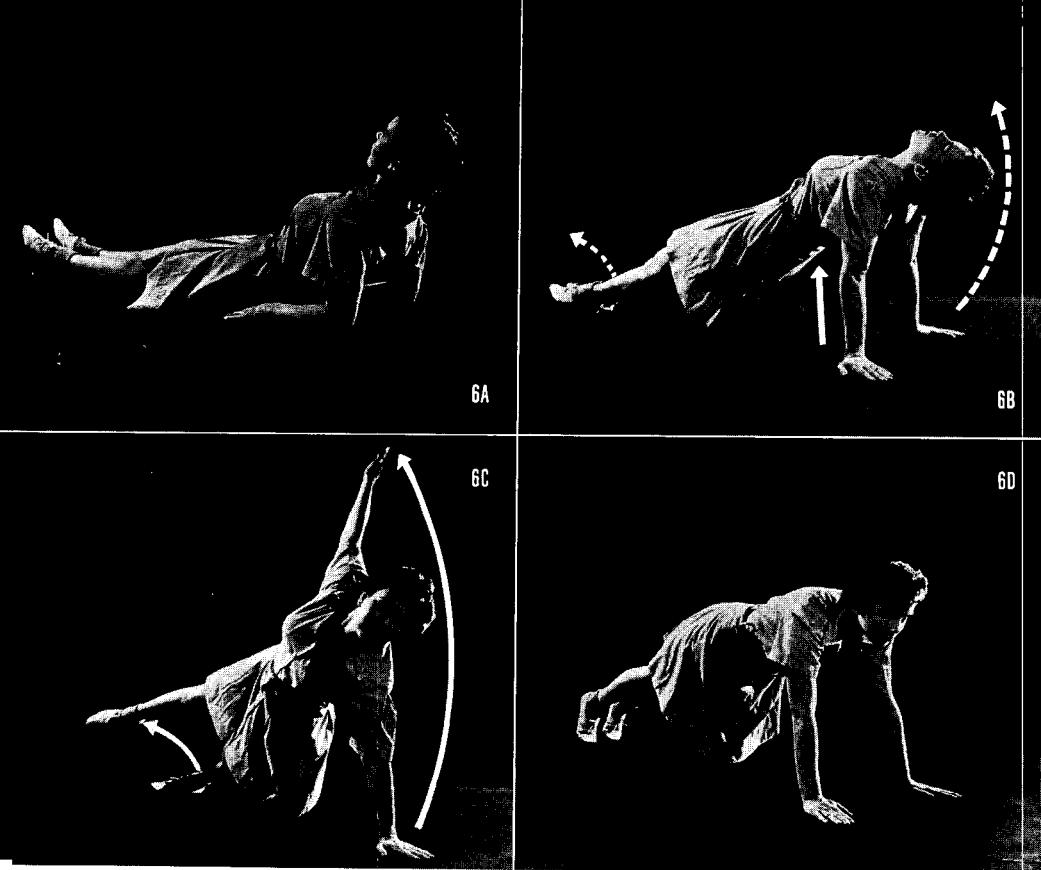
5A



5B



PARTNER ELBOW RESISTANCE. Assume position shown above. *A*'s arms are folded at shoulder height. *B* places hands against *A*'s elbows. *A* pushes elbows back at shoulder height; *B* resists enough to make it difficult. *B* pushes *A*'s arms back to starting position, *A* offering resistance.



TURN OVER. Sit on floor, knees and legs straight, hands opposite chest, elbows on floor supporting trunk. Straighten the elbows, turn the fingers toward the head, and lift the hips so that the body is supported on heels and hands. Turn from a back-down supported position to a prone fall position by turning to the left. Lift the right leg and right arm up into the air and bring them down across body to the prone fall position. Continue turning in same direction by lifting left leg and arm up into air and returning to starting position. Relax. Repeat movement going in other direction.

RESIST AND ASSIST

RESISTANCE EXERCISES. In working with a partner, it is important to understand the principle of resistance. The partner is there to offer just enough resistance to make you work a little harder than you would need to if she were not there. Care should be taken that the resistance is not so great that the exercise must be done poorly. Resist only enough to make the exercise difficult; not enough to make it impossible. The amount of force applied necessarily varies with the exercise performed and the individual performing the exercise. Learn to recognize muscle groups, to make them work against your resistance. Review the Imaginary Push and Pull in the Shoulder and Arm Strength Progression keeping in mind the principle of resistance. Remember—apply resistance to make the exercise difficult, not to make it impossible.



7A

WING LIFTS. Lie on face with hands clasped behind neck. Lift head and chest approximately 12 inches from ground, keeping feet in contact with ground. If chest is lifted higher than 12 inches it involves more than contraction of upper back and neck muscles. Return to starting position. Repeat as many times as possible in a quick rhythm. Elbows should not touch floor throughout the exercise. The number of times the exercise is performed should be increased as your strength increases. This is the last exercise in the back and neck strength progression and as such is included in the daily exercise series. It may also be used as a self-testing activity and you can actually see your day-by-day improvement by keeping count of the number of performances you can do correctly. The exercise is not difficult to perform but should be continued only as long as good form can be maintained. There should be a distinct moment of relaxation at the starting position each time to avoid a rocking movement which often occurs when the exercise is done continuously. The hands should offer resistance at the neck. This will improve the tone of the neck muscles.

7B



MARCHING DEMANDS LEG STRENGTH

IN THE ARMY you'll march.

Each step you take will demand muscle. Not bulky muscle, but lithe, flexible muscle that enables you to take an easy, swinging stride—and keep it up.

The anatomy of leg action is displayed by the manikin. That muscle down the front of the leg is the quadriceps—"quad" for short. It is composed of four muscles. The quad is the kicking muscle of the leg. It lifts the thighs in front of the body and straightens the knees.

The muscle pictured on the buttocks also has a scientific name—gluteus maximus. It is a naturally strong muscle, but if it is not used it is prone to fatty development. Long periods of sitting tend to weaken it, so does artificial support. Vigorous exercise is necessary to retain this muscle in a normal, vigorous state.

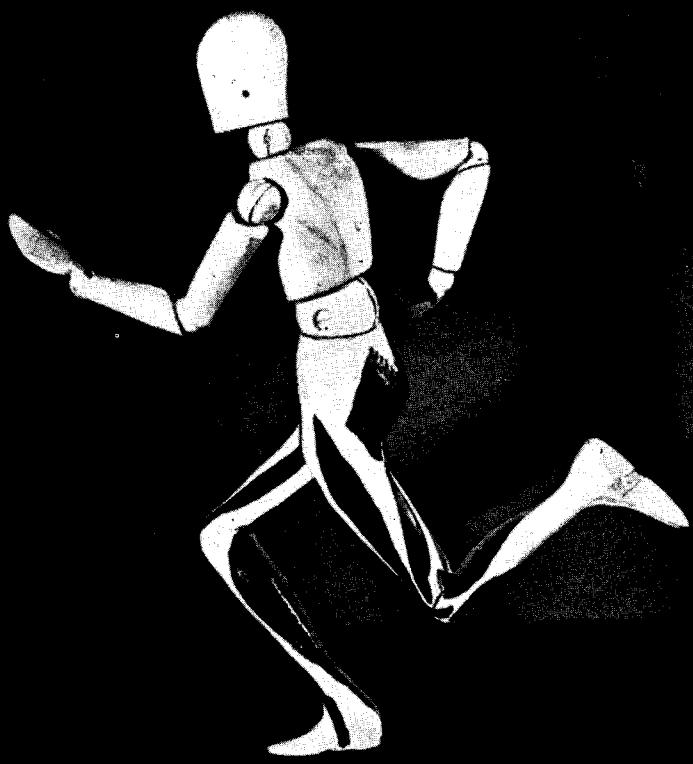
At the rear of the leg is the biceps femoris—part of a group of muscles called the "hamstrings." You feel the stretch in this muscle when you try to touch the ground with your hands while keeping your knees straight. The hamstring muscle pulls the thigh back and causes the knees to bend.

That large muscle on the back of the leg is the gastronemius or calf muscle. Its tendon runs down to the heel and is commonly called the tendon of Achilles. Every time you lift your heel off the ground, with each step you take, you use this important muscle.

Walking, running, jumping, lifting, carrying, and many other everyday activities demand that you have strong legs. Firmly toned legs and buttocks, devoid of excessive fat, are important to attractive appearance.

Planned exercise helps you avoid or lose the excess weight that tends to deposit on the buttocks, thighs, and calves of the legs. At the same time it tones up the muscles so that they have the power to carry you through a hard Army day.

One more word about marching. When you do it well, you give your feet a healthful work-out. But poor control of the legs places an undue strain on the feet. Then pain and fatigue result.



LEG EXERCISES

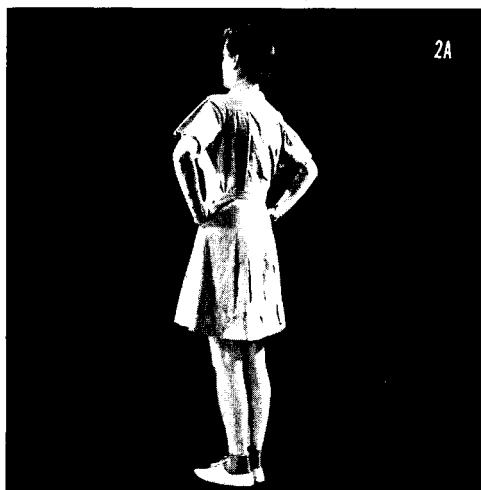
WORK TOWARD EASE AND SMOOTHNESS

1A



PARTNER PUSH-UP. *A* lies on ground, arms under hips, feet stretched up toward partner's shoulders at 45° angle, legs slightly apart. *B* places hands and shoulders on *A*'s feet, relaxing so *A* is holding

2A



2B



HALF KNEE BOUNCES. Stand erect with hands placed on hips. Bend knees, keeping body erect. Return almost to a starting position.

Repeat rhythmically and with increasing speed so that a bouncing movement is attained. Knees straighten only at the end of the exercise.

OF PERFORMANCE IN ALL EXERCISES

1B



her entire weight. *A* slowly lowers legs by bending knees to chest, then stretches legs back to starting position. *B* remains relaxed with weight on *A*'s feet. Repeat exercise until legs become tired.

3



FULL KNEE BENDS, HANDS ON KNEES. Bend knees to squat position with hands on knees. Use hands on knees to push back to stand.

4



FULL KNEE BENDS, HANDS ON FLOOR. Bend knees to squat position touching hands to floor between knees. Rise. Repeat it rhythmically.



5A



5B



5C

JUMPING. Bend knees slightly as in 5A. Rise on toes. Repeat rhythmically and with increasing speed until a jump is attained. Work for smoothness of movement then for height in each jump. Use arms to lift body into air. Toes should be pointed when body is in air. Shock of landing should be absorbed by landing on toes and shifting weight to heels and bending knees. See "Jumping," page 71.



6

SQUAT JUMPING. Stand with either leg slightly in front. Bend knees to squat position. Extend legs forcibly to cause body to rise a few inches off ground in an erect position. Use arms to help lift body into air. From this jump, return to squat position and repeat rhythmically. After the action is mastered increase the height of the jump.

Now, with a fresh eye, study the pictures on these pages once again. What is their one outstanding quality? Right—it is the posture and balance maintained throughout each phase of the exercises. Be sure you also watch your posture as you do these different activities.



RUNNING. For this exercise arms should be bent to a comfortable position for running. Legs should be lifted as high as hips in front with toes pointed down toward ground. Running time should be gradually increased each day to build up endurance. In an outdoor program running for distance should be substituted. To gain the most benefit, maintain the principles of good posture while running.

ARMIES MOVE ON THEIR FEET

ARMIES move on their feet. That fact has hitherto ruled out female Armies, for the average woman's foot is her "Achilles' heel"—the weakest spot in her armor. High heels, poorly fitted shoes, and neglect of proper foot hygiene have made women's feet a source of trouble and unhappiness.

In the Army you receive well-fitted shoes with a moderate heel—designed to help you use your feet correctly. Planned exercise is the second factor in winning foot health.

Study your foot for a moment. Its bony structure consists of two arches. One is called the longitudinal arch because it runs the length of the foot. The other is called the metatarsal arch because it runs under the metatarsal bones—the bones of the sole of the foot. When one of these arches is strained it weakens the other, for the foot is an unusually sensitive and well-balanced structure.

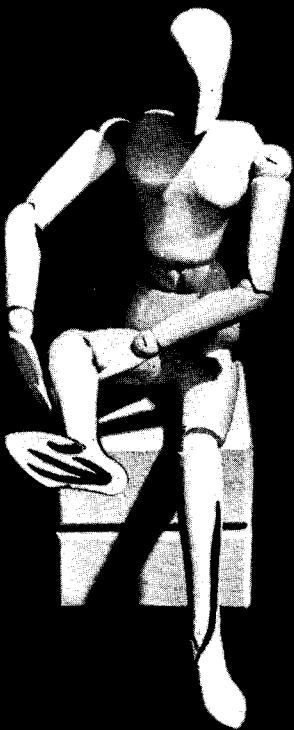
This structure is assisted in maintaining its position by ligaments and muscles. The muscle you see on the side of the manikin's leg is the "tibialis anticus"—a big name for a muscle which runs along the front of the leg near the shinbone. This muscle runs across the ankle and attaches itself to the underside of the foot near the big toe. It therefore helps to maintain the arch. When it contracts it pulls up on the arch.

There are many other sets of muscles on the bottom of the foot that play an important part in maintaining the arch. They come into play when the toes are used.

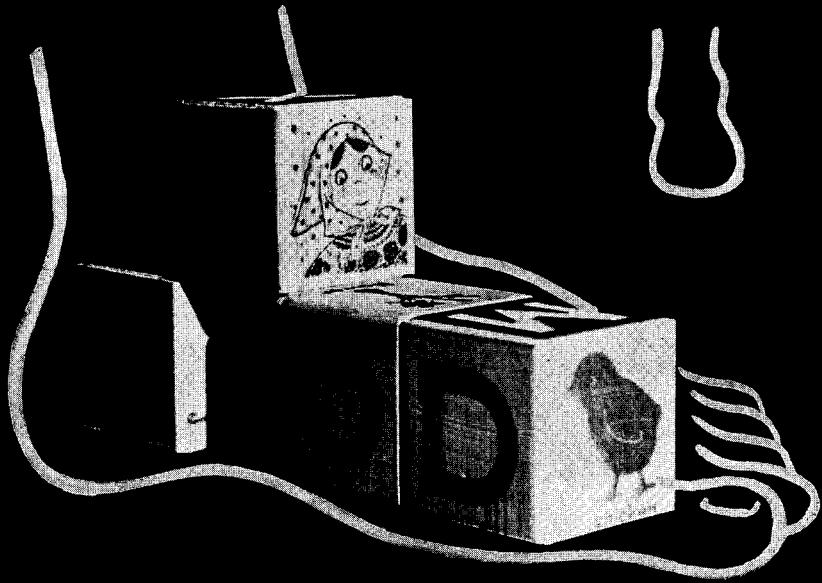
Whether or not you remember the bony or muscular structure of the foot isn't important. It is important to know that the best exercise for the foot is to walk correctly. To do this simply place the heel down squarely. Shift the weight down the foot more toward the outer border than the inner border. Grip and push off with the toes.

Planned exercises give your feet the build-up they need. They make walking and standing easier, more pleasurable, less fatiguing. Nothing in this entire series can mean more to a woman's Army than the exercises that follow.

See "Marching Exercises" for variations of walking that help foot health.



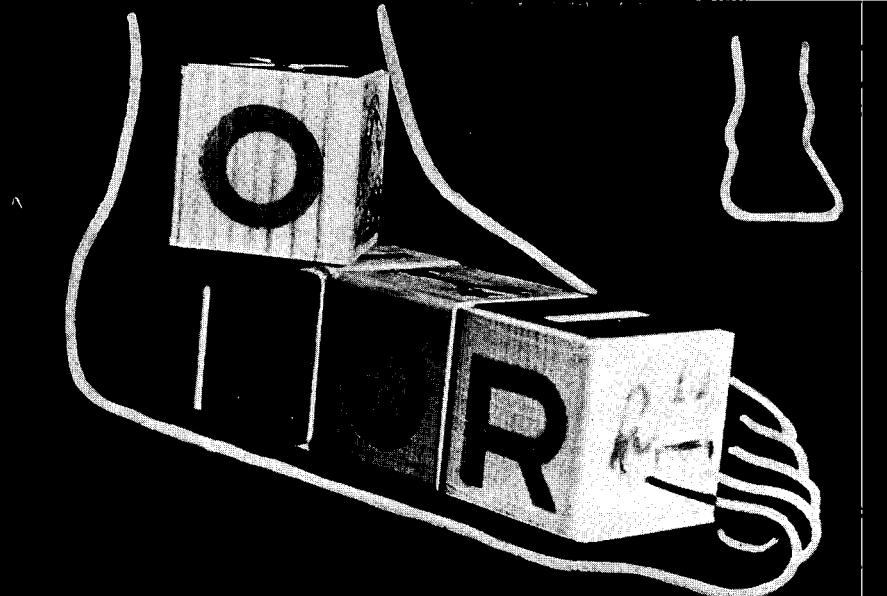
FOOT EXERCISES



PRINCIPLES OF CORRECT FOOT POSTURE

GOOD. The foot above spells "good" because it shows the correct mechanical position of the various parts of the foot. Notice that the block which represents the ankle bone is squarely over the foot. The ankle will look firm and small. Notice that the arch is plainly visible. Keep the body weight toward the outer borders of the feet.

POOR. The foot below spells "poor" because it violates the mechanics of foot posture. Notice that the arch block protrudes toward the inner border of the feet. The ankle will be prominent and make you feel that it is large. "X" marks the spot where the arch was. Weight thrown toward inside border of the feet has weakened the arch.

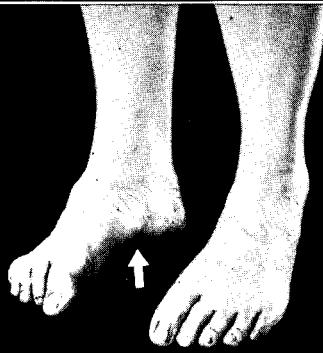


SOME SIMPLE EXERCISES FOR YOUR FEET

1A



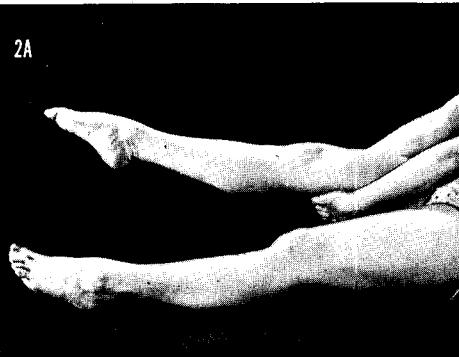
1B



1C



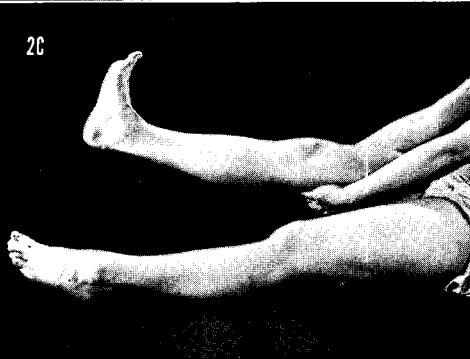
2A



2B



2C



HEEL AND TOE RAISING. Stand with feet parallel. Rise on toes. Return to starting position. Shift weight to outer border of feet. Return to starting position. Shift weight to heels, raising toes from ground. Return to starting position. When these three movements can be done well, repeat them consecutively; up on toes, roll to outer edge of feet, and back to heels without returning to starting position.

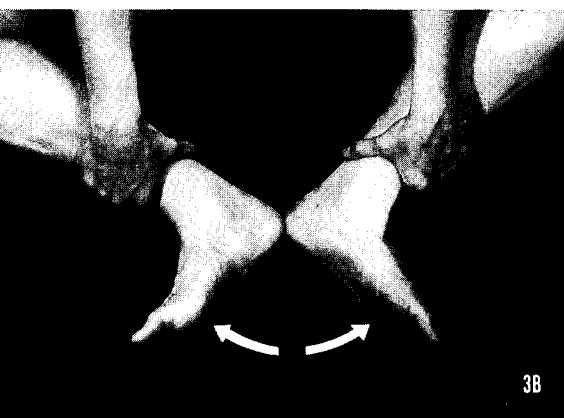
FOOT CIRCLING. Sit on ground with legs outstretched, hands under one knee to hold leg off the ground. (1) Point the toe as far as possible. Relax. Push the heel as far out as possible. Relax. Combine the two. (2) Turn the foot in as far as possible. Relax. Turn the foot out as far as possible. Relax. Combine the two. (3) Circle the foot. Emphasize pulling up on the arch. Do not twist the leg from the knee.

MORE EXERCISES



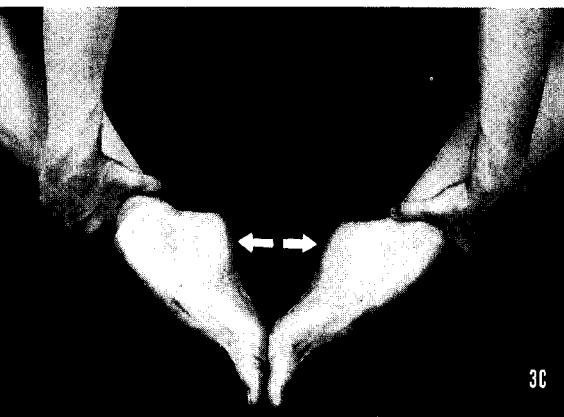
3A

HEEL AND TOE PULL. Sit on ground with soles of feet together, hands grasping ankles. The back should be kept straight throughout the exercise.



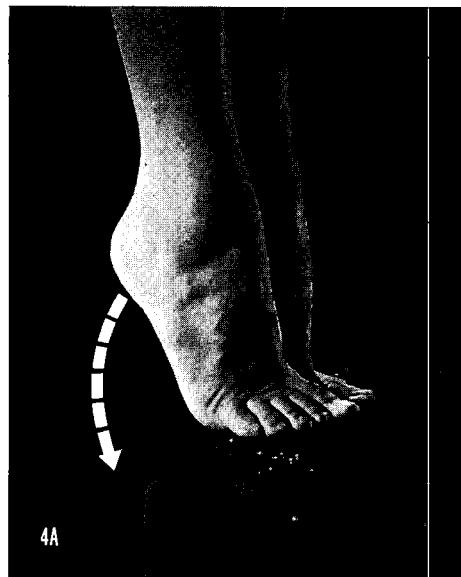
3B

Keeping heels together, pull balls of feet as far apart as possible. Keep heels and little toes in contact with the ground. Return to first position.



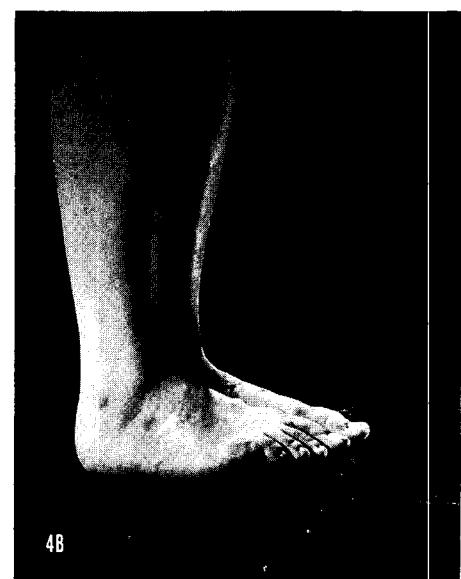
3C

Keeping balls of feet together, pull heels as far apart as possible. Return to starting position. Repeat these two stretching movements alternately.



4A

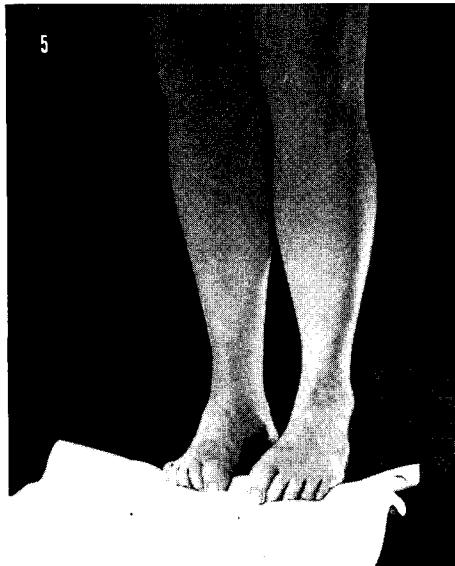
BALANCED HEEL LOWERING. Standing on foot locker with only balls of feet holding weight, heels extended back off trunk. Rise on toes.



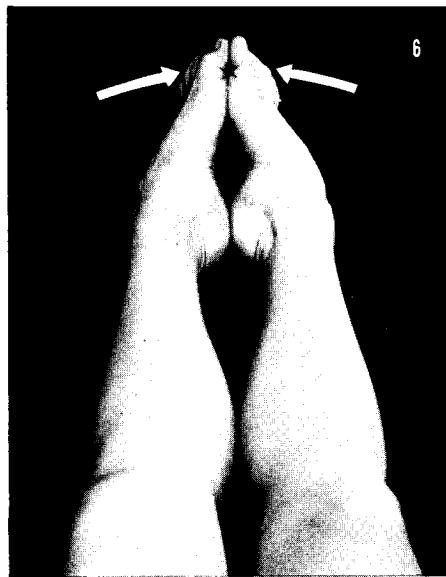
4B

Drop the heels down as far as possible below the level of the trunk. This exercise can be done with a partner aiding for good balance.

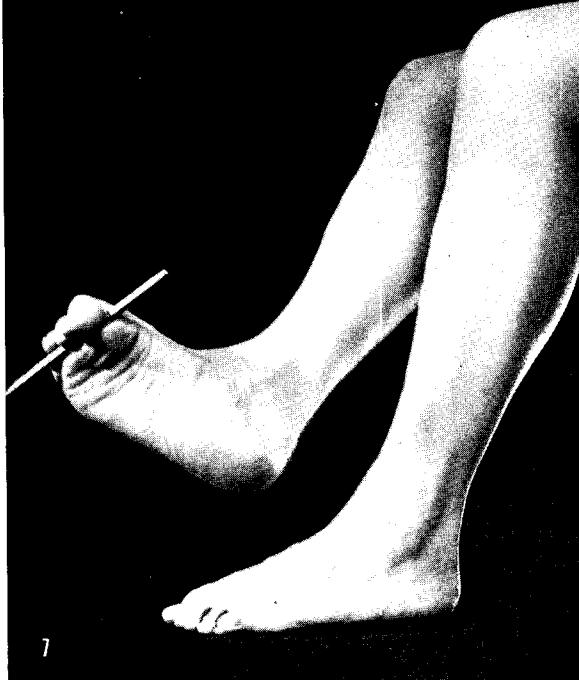
FOR FOOT FITNESS



TOE GATHERING. Curl toes over edge of towel. Pull towel toward you by gripping, releasing, lifting toes. Relax. Repeat. Stress curling toes.



SOLE TO SOLE. Sit on ground with legs outstretched. Attempt to touch soles of feet together without bending knees. Remember posture.



TOE PICK UP. Pick up paper or pencil with toes. Change object from one side of body to other by lifting and placing to outside of opposite foot.



TENDON STRETCHING. Stand erect and fall toward wall keeping feet flat on floor. Regulate your stretch by the distance from the wall.

HOW TO SAVE ENERGY

T'S OBVIOUS that five women are stronger than one woman.

It's equally obvious that five sets of muscles are stronger than one set of muscles. Correct body mechanics is the art of distributing the strain of a job over several sets of muscles instead of putting the whole load on a few. It is the art of using the strongest muscles of the body instead of straining the weaker members. As a result, you do your job more efficiently. You use up less energy. You avoid injury. And you feel fresher and happier at the end of a hard day.

Turn for a moment to page 83. Note how Josephine Jerk wields a broom and lifts a weight. Because she uses her body clumsily, she doesn't do her job very well. She is inefficient. She *looks* inefficient.

We laugh at the idea of a person scratching her right ear with her left hand. Why? Because it seems a foolish waste of energy—a hard way to do an easy thing.

Yet many of us distort our bodies, employ wrong muscles and approach simple tasks in complex ways that would also be laughable were they not so costly in energy.

It is not hard to understand the simple principles underlying the exercises that follow. They are based on practical common sense.

Neither is it hard to have them become fixed habits. At first you may be conscious of them as you do your work. But after a while, you will employ the principles of correct body mechanics without realizing it—in everything you do, whether it is making a bed or rising from a chair.

On the following pages you see correct ways of lifting, pushing, pulling, falling, and crawling. Study these pictures and you discover that when the body does these things efficiently, it does them gracefully as well. The two—efficiency and grace—are inseparable.



BODY MECHANICS



BODY MECHANICS: LEARN THE RIGHT



LIFTING. Lifting should be done by means of leg muscles rather than back muscles. To lift a heavy object bend the knees getting the body as much underneath the object as possible.

CARRYING. Place the carried object in such a manner that the weight is centered over the whole body. If possible this should be on the shoulders with the back nearly straight.



PULLING. Pulling should be accomplished by bracing the feet firmly, bending the knees, rounding the back, grasping the object firmly and letting the body weight do most of the actual pulling.

WAY TO DO THESE EVERYDAY JOBS



PUSHING. In pushing any heavy object make use of the whole body weight. Lean the body from the ankles, brace the feet and push against the ground. This may be done by facing the object and pushing with the arms. Or with the right or left shoulder against the object and the body facing sideways and pushing with shoulder. Or with back against object pushing with upper back.



JUMPING. When jumping from a height land on the toes bending the knees to absorb the shock. The knees should be bent in proportion to the height from which the jump is made. Study pictures.

BODY MECHANICS



TWO-MAN CARRY. Kneel at side of victim. Grasp shoulders of other bearer around victim's back. Grasp wrists of other bearer under victim's thighs. Rise slowly from ground, using the legs to push.



CARRYING VICTIM BY EXTREMITIES. The bearer at the head lifts the victim by the shoulders until she is able to clasp her hands around her chest. The bearer at the feet places her hands



FOUR-MAN LIFT. The bearer at the shoulders puts one arm under the victim's head, neck and shoulders and the other under the upper part of the victim's back. The second bearer has one

ARE IMPORTANT IN FIRST AID



around and under the victim's knees. At the signal, "Lift" from the head bearer, the victim is lifted and carried. In rising, the bearers must be sure and lift themselves by means of leg muscles.

FIREMAN'S DRAG. Victim's hands are tied or clasped around bearer's neck. Bearer raises victim's head and shoulders off ground and progresses by crawling, dragging victim on ground.



arm under the victim's back and the other under the thighs. The third bearer places one arm under the knees and the other under the ankles. The fourth bearer takes position on the opposite

side of the victim at the hips and is not shown here. All bearers lift together and place victim on their knees. All rise together and carry victim in horizontal position. Keep step in walking.

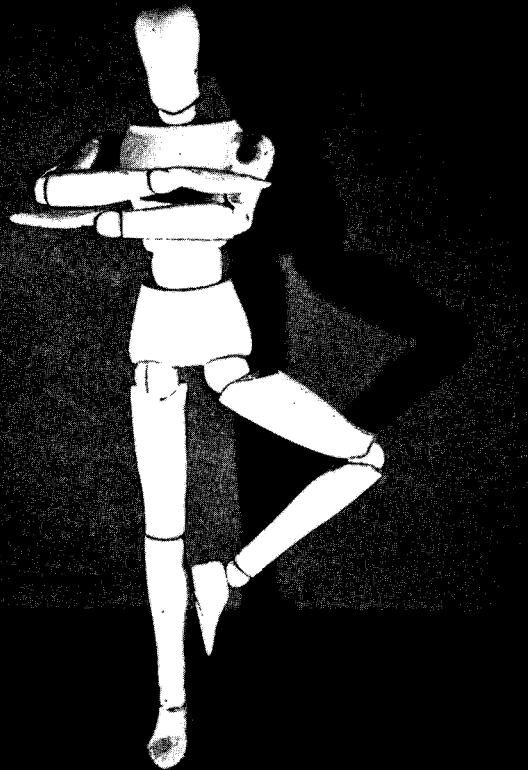
FALLING AND CRAWLING



FALLING. With right foot placed forward and toes turned inward, fall forward, landing on the outside of the right knee and thigh to break the fall. As body falls toward ground, break the rest of the fall with hands. Keep body relaxed. Distribute impact of ground evenly along the entire body.



CRAWLING. To prepare to crawl, bend the left knee and raise it as high as possible with the inside border of the left foot against the ground. The hands are placed opposite the ears. The body is pulled forward by the action of the arms and the bent legs. Keep body close to the ground always.



ACTIVITIES FOR AGILITY BALANCE AND COORDINATION

THESE stunts, games, and relay races are in the nature of recreation. However, they should be emphasized as abilities and skills which are necessary aids to body conditioning. Balance cannot be overemphasized. Every opportunity should be taken to improve your control in balance work. Remember that good posture depends on balance. The partner contests give you an opportunity to pit your strength and agility against an opponent. Relay races involve speed, agility and swift coordination between body and mind.

GOOD WAYS



1

HAND WRESTLE. Take position shown above. Try to make partner move either foot by pushing or pulling her off balance without body contact. Quick movements are best.

2A



3

ROOSTER FIGHT. Take position shown. Attempt to make opponent release toe grip by pushing with right shoulder.

2B



4

DUCK WADDLE. Walk forward picking up each foot, lifting it with the hand grasping ankle. Do not release ankles.

TO LEARN BALANCE AND AGILITY



5

CRAB WALK. Take position shown above. Move body to either side by walking on hands and feet. The body may also be moved frontward or backward. This movement can be used as a relay race if the distance is not too great. Be sure that the hips are kept well off the ground, with arms straight.



6



7

DRAKE FIGHT. By pushing, shoudering, and side stepping, attempt to compel opponent to fall over or release her hands from her ankles.

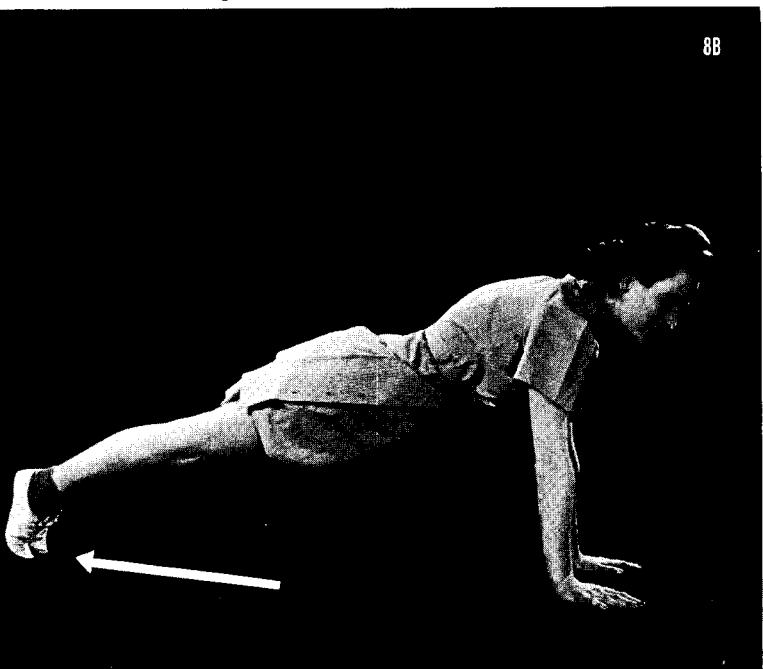
CRANE WALK. Walk forward or backward, keeping knees straight. This movement can be used as a relay race if the distance is short.



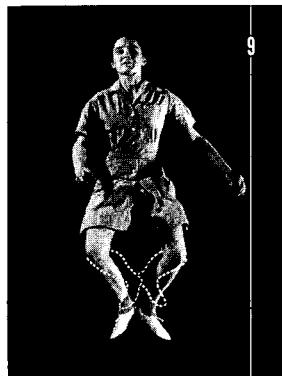
8A

SQUAT THRUST. Stand erect. Bend knees and place hands on floor between knees. Extend legs backward with a jump. Body should be supported on hands and toes so that a straight line could be drawn from head to heels. Return to bent knee position. Return to erect standing. Repeat these four movements rhythmically. This exercise may be used as a test of agility and endurance by counting the number of performances you are able to complete in 30 seconds.

8B

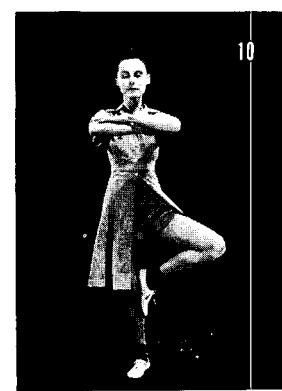


9



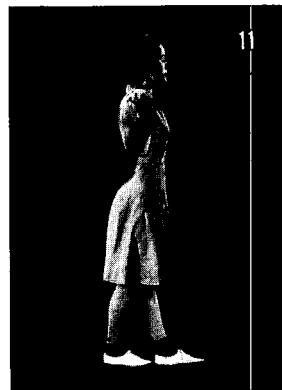
HEEL CLICK. Erect standing. Jump into air and try to click heels twice before landing.

10



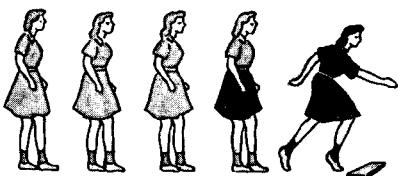
BALANCE STAND. Position as in picture 10. Close eyes. Balance for ten seconds.

11

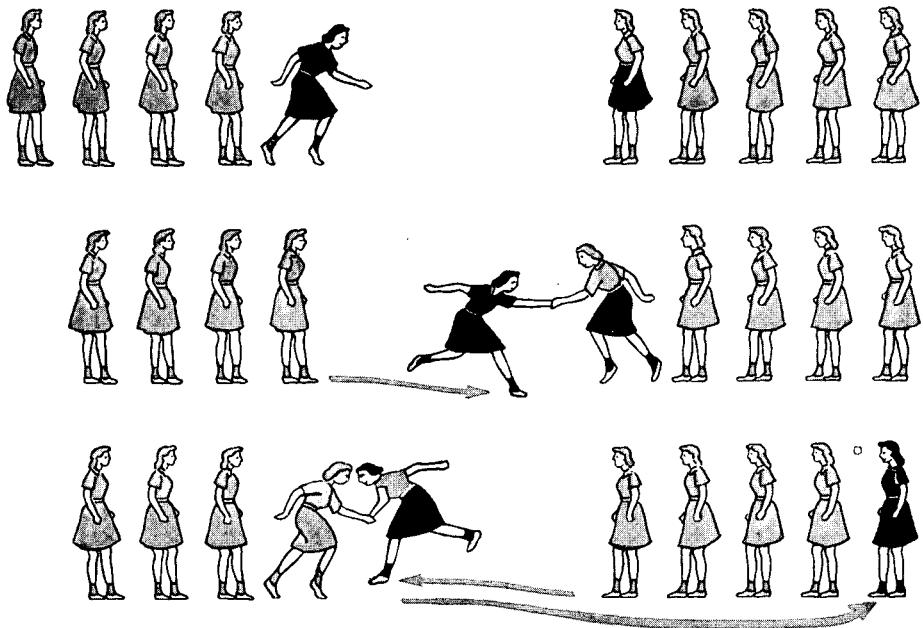


BALANCE WALK. Walk toe to heel in a straight line with eyes closed, arms extended.

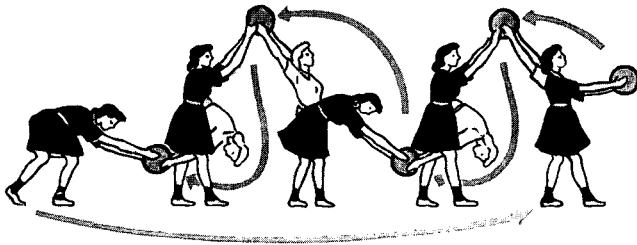
RELAY RACES ARE TESTS OF SPEED



LINE RELAY. The group forms in files with about 5 feet between files. Each file is made up of an equal number of participants. In the above illustration there are five. The first person in each file should be behind a restraining line over which she does not step until the signal to begin. Opposite each file at a chosen distance should be a point to which each participant should travel. On the signal to go, the first person in each line proceeds to the given point and returns to the starting line, when the next person in each file starts the trip. Upon completion of the trip the first person goes to the end of the file. This continues until the last person in the file has taken her turn. The first file to finish wins. The activities used in relay races are limited only by the instructor's ingenuity. Any of the common locomotor movements such as running, hopping, jumping, sliding, or skipping may be used. Many of the agility activities described on previous pages can be used when the distance of the race is not too great.



SHUTTLE RELAYS. The group forms in teams composed of two files facing each other, with an equal number of participants in each file. The above illustration has 5 participants in each file making a team total of 10 participants. Each file is behind a restraining line. On the signal to go the first person in the left file proceeds to the first person in the right file. The first person in the right file goes to the left file. This shuttle continues until every person is in the file opposite to the one in which she started. The first team to be so formed wins. The women raise their hands to signal that they are finished.



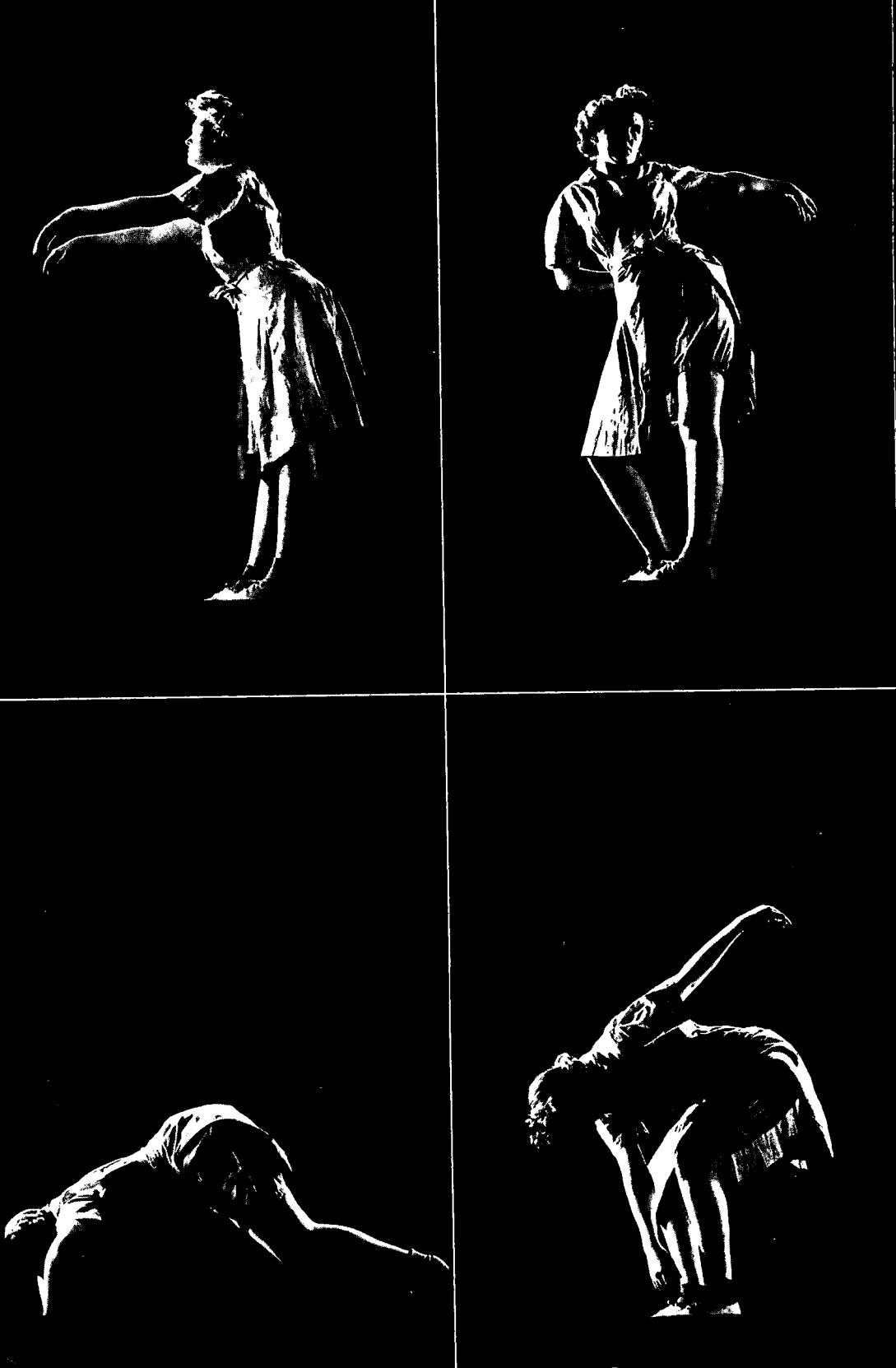
OVER AND UNDER RELAY. An object is passed over the head of one player, between the legs of the next player, etc., until the last player receives it. She runs to the front of the file and starts the object over and under the file again. This continues until the file is in original order. The first to finish wins. If object is lost, it must be restarted in same place.



ARMS AND THE WOMAN

THESE civilians build a machine of war. The path of each moving part is fixed. Pistons, bearings, wheels, move directly and efficiently, without wobble and waste. The human body is designed to function with equal efficiency. But the range of movement is broader; the chances of wasteful motion greater. Movement, to be efficient, must be controlled by muscles—muscles trained to perform everyday actions with precision and control.

The science of your body's movement is called Kinesiology (Kin-eez-i-ology). It governs the movements of these workers. It governs the performance of your military duties. The planned exercises you receive in the Army are based on this science. They develop habits of movement which save energy, improve efficiency, reduce fatigue.



DON'T BE A JOSEPHINE JERK

JOSEPHINE JERK is the limp number in every outfit who dives into her daily dozen with the crisp vitality of a damp mop. Her joints are all limber in the wrong places—her head, hands, and hips dangle, her full dips resemble Pike's Peak, and she worships the body beautiful to such an extent that she always bends her knees.

Josephine isn't built like other women. Her body has a posture all its own. And while she can snap to it when the sergeant's eye is on her, bones and muscles fold up like an accordion when she's on her own. Her body lies down standing up.

Because Josephine's muscles and bones let her down, she counts on her girdle to hold her up. But when the going gets tough, usually after 10 minutes of any activity, she leans heavily on the nearest broom.

Josephine never does anything in halves. When she lifts a weight, she throws in her body's weight for good measure, and wonders why she just can't make it.

These pictures may seem funny. But too many Josephine Jerks hinder, rather than help, the war effort.

Don't be a Josephine Jerk.

When you exercise, do it vigorously and correctly.

Get the most out of each exercise.

Realize that planned exercise, properly done, develops your entire body evenly, with balanced strength and graceful posture as the result.

When you work, make your task easier by using your body properly.

Planned exercise shows you how.



MARCHING EXERCISES ARE

PURPOSE

THESE exercises aid in maintaining physical well-being. They are designed for use while marching. They provide an excellent means of strengthening the muscles of the feet and legs. They provide variety on a long march or on the marches to and from classes or work.

PRESENTATION

THESE exercises are to be performed in a military manner. Commands are given as in drill. The preparatory command and the command of execution are given after the exercise has been explained.

Most of the exercises are performed at quick time, some may be performed at double time, and a few at slow time.

“QUICK TIME, MARCH” is the command used to bring the group from these exercises to marching at attention.

EXERCISES

1. “TOES INWARD, MARCH.” The feet are turned in a “pigeon-toed” manner. This is an excellent arch strengthening exercise.

2. “ON TOES, MARCH.” The group rises on toes and marches, keeping knees straight. Double time.

3. “HEEL TO TOE, MARCH.” As each heel touches the ground, the weight is rolled to the side of foot and to the toes.

4. “TOE TO HEEL, MARCH.” Step on toes, then drop heels to ground.

5. “EXTEND LEGS ANKLE HIGH, MARCH.” As each leg is extended forward, the knee is straightened so that the foot is about 4 inches off ground at fullest extension.

6. “RAISE KNEES, MARCH.” Bend knee and raise as high as possible. Double time.

7. “CONTINUOUS CHANGE STEP, MARCH.” Advance left foot; place toes of right near heel of left. The left foot advances 15

A SUPPLEMENTARY PROGRAM AID

inches, and right foot advances a full step. The toes of the left foot are then brought up to heel of the right foot, which advances a half step when left is advanced a full step, etc. (step, close, step).

8. "LUNGING STEP, MARCH." The length of step is 45 inches, the knee in advance being well bent, the other leg remaining fully extended, heel raised, trunk erect. Slow time.

9. "CROSS STEP, MARCH." As legs are extended forward in turn, the right leg is crossed and placed to the front and outside of the left. The left leg is then brought around the right leg and crossed. Slow time. The body does not turn.

10. "HANDS ON SHOULDERS, MARCH." "WITH ELBOW PULLING, MARCH." Place hands on shoulders with elbows bent shoulder level. On each left step pull elbows back. On each right step let elbows rebound to original position.

11. "SLIDE (LEFT OR RIGHT), MARCH." (Left) Step to left with left foot. Bring right foot to left. Step to left with left foot and repeat.

12. "HANDS ON SHOULDERS, MARCH." "ARM STRETCHING UPWARD, SIDEWARD, FORWARD AND DOWN, MARCH." On each left step, place arms in the position and in the order of the command. On each right step return the hands to the shoulders.

13. "SHOULDER HUNCHING, MARCH." Arms hang loosely at sides. On each left step, hunch shoulders up. On each right step return shoulders to normal. Shoulders may be hunched forward, backward or circled.

14. "ARMS OVERHEAD, ON TOES, MARCH." Place arms high overhead, palms facing each other. Hold body stiffly erect and walk forward, high on toes with ankles and knees tense.

15. "WITH STIFF ARMS AND LEGS, MARCH." Arms swing stiffly forward to shoulder level and backward in opposition to legs. Hold body stiffly erect and walk forward with knees stiff.

GAUGE YOUR PHYSICAL ABILITY

PURPOSE

SELF-TESTING activities may be used by any woman to test her own physical ability. If you cannot perform these simple tests, it means that you must spend more time and more effort on the improvement of your physical condition. Lack of success in these activities denotes lack of muscle tone and endurance. No standards of performance have been set at this time. There should be constant improvement over a period of time to the limit of your capacity.

Self-testing activities may be used by the instructor to test the physical quality of a group. Results may then be used as a guide to lesson planning. Results may be used to motivate the women to more strenuous effort by pointing out their weaknesses. Results will point out individuals needing special attention.

CONDUCT OF THE TEST

ALWAYS use light exercise (such as a Cadence Series) before proceeding with the testing activities.

Instructors should prepare recording sheets in advance. A sample of such a test blank is on the opposite page.

Instructors and individuals taking the test should be sure of the correct execution of the test items.

SELF-TESTING ACTIVITIES

1. **FULL DIP.** This exercise may be found on page 88. Score is determined by the number of full dips executed correctly. Only the chin should touch the floor on each full dip.

2. **SIT-UPS.** This exercise may be found on page 88. Score is determined by the number of sit-ups that can be executed correctly. The hands should be at the sides and the feet on the floor on each sit-up.

3. **WING LIFTS.** This exercise may be found on page 89. Score is determined by the number of lifts that can be executed correctly. The feet should remain in contact with the floor and the head should be lifted not more than 1 foot off the floor on each lift.

4. **ENDURANCE** may be tested by the following means:

Squat Thrust: This exercise may be found on page 78. Score is determined by the number of squat thrusts performed in 30 seconds.

Running: Endurance may be determined by either running in place or running for distance at an even dog trot pace. Consult page 61 for the correct execution of stationary running and page 23 for the correct method of running.

5. **BALANCE.** Balance exercises may be found on page 78. Score is determined by the number of seconds position can be held.

WITH THESE SELF-TESTING ACTIVITIES



HISTORY:

Age: Years and months

Height: Nearest half inch.

Weight: Nearest half pound.

CHART NOTES:

1. The items of age, height and weight are included to assist instructor or woman to evaluate performance.
 2. A chart of the same type may be set up for the Daily Exercise Series. It would serve as a check on the woman's improvement in the field.

THIS DAILY EXERCISE SERIES WILL HELP



WARM-UP

IT DOESN'T take much time and energy to keep yourself fit in the field. What it takes are common sense and will power.

Some women coast on the energy and muscle tone built up by planned, compulsory exercise in camp. They're too tired or "busy" to exercise in the field. Their jobs use certain muscles and neglect others. Balanced control is lost. The smooth, elastic muscle structure built up in camp turns flabby. Fat builds up in the wrong places. Posture becomes sloppy. A gloomy picture, but a true one.

Other women form the exercise habit. On the very first day they leave camp, they find a few mo-

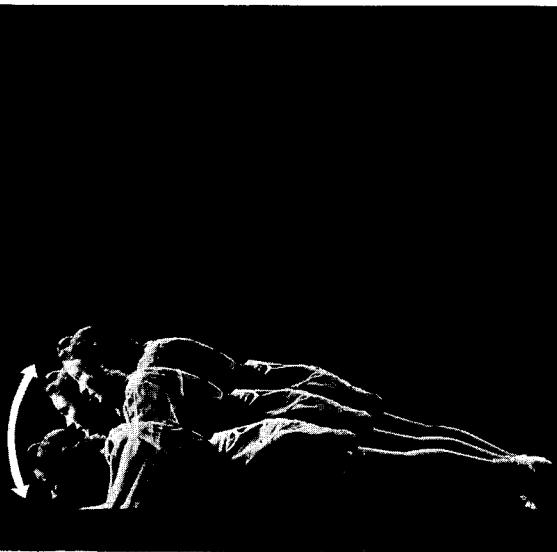
ments to do a brief and simple series of exercises. And they do these exercises every day thereafter.

These "keep-fit-in-the-field" exercises are described here. There are three important things about them which should never be forgotten.

First, you may do them alone, unobserved. You may become careless. Don't. Their value depends on your doing them as correctly and precisely as you would under the eyes of an instructor.

Second, do them all. For each of them is planned to preserve the tone of a certain set of important muscles. To do some and not do others is to fall short of the balanced control essential to efficiency and good appearance.

Third, do them the very first day you're on your own. Don't wait to be checked and supervised. Make it your own very special responsibility.



FULL DIP



SIT-UP

TO KEEP YOU FIT IN THE FIELD

DAILY PROGRAM

WARM-UP EXERCISE

Choose any cadence series or combination of cadence exercises that involves all sections of the body. Perform vigorously so that the body is ready for the more strenuous activity.

FULL DIPS

Perform as many full dips as possible. Try to exceed the total number you were last able to do. This exercise is shown at the bottom of the page. For a complete description, see page 44.

SIT-UPS

Perform as many times as possible. Increase the number daily. This exercise can be made more difficult by placing the hands behind the

head. For further description of this exercise, see page 49.

WING LIFTS

Repeat as many times as possible, trying to better your former high. Be careful not to lift the back too high. The emphasis should be on the upper back and neck. Complete description of this exercise is on page 55.

RUNNING

When running in place, strive to increase the time of endurance. Never desert good form for time. When running for distance, increase the distance as often as possible. For the correct execution of stationary running, see page 61. For the correct method of running for distance, see page 23.



WING LIFT



RUNNING



RELEASE OF TENSION ACTIVITIES

OCCUPATIONS that require long periods of desk work or other close work tend to keep your body tense. Efficiency is lowered if this tenseness is not relieved. These activities will help to relieve that tenseness and repair your efficiency. Many of them can be performed at your desk. Others may be used to advantage in barracks.

EXERCISES

1. *Progressive Relaxation.* Lie back downward on the ground or the floor. Extend both arms overhead and stretch completely throughout the body. Relax the entire body, beginning with the fingers and letting the feeling of freedom flow through the body to the toes. Repeat. This is a good exercise to use if you have difficulty going to sleep.
2. *Neck Release.* See chart on page 121. Use any or all of the exercises under HEAD or SHOULDERS. Perform in a relaxed manner.
3. *Arm Fatigue.* See chart on page 121. Use any or all of the exercises under ARM SWINGING or ARM FLINGING. Perform in a relaxed manner.
4. *Lower Back Fatigue.* See chart on page 121. Use any or all of the exercises under TRUNK. Perform in a relaxed manner.
5. *Foot Relaxation.* See Foot Exercises, pages 62 to 67.
6. *Whole Body Release.* See chart on page 121. Use any cadence series, preferably 1 or 2. If variety is desired, a series may be made up by selecting any one exercise from each column. Thus, an individual may choose those exercises she likes to perform and originate her own series.



BRITAIN'S WAAFS

BRITAIN'S Women's Auxiliary Air Force was formed on June 28, 1939, by Royal Warrant. It is part of the Crown forces, under direct command of the RAF. Its members do not fly, but they serve as armorers, electricians, flight mechanics, wireless operators, motor transport mechanics, meteorologists, cooks, waitresses, and in dozens of other occupations. Among other jobs, they serve as balloon barrage crews. Hoisting a balloon into the air is a muscle-straining ordeal. It requires 10 or 12 men to handle a barrage balloon. Today the job is being done by women. That takes strength and stamina—won by planned exercise in camps throughout the Empire. The WAAF is renowned for the superb posture of its members. And their reliability, year after year, has won the applause and admiration of the senior Services.



SOME PRACTICAL HINTS ON

UNARMED self-defense activities help to prepare women to take care of themselves under all circumstances. The occasion may never arise where such tactics are needed; but if it does, the women are not defenseless, though unarmed. Unarmed self-defense training is essential for military police groups and overseas contingents, but should be presented to as many women as possible.

INSTRUCTION MATERIAL

INSTRUCTION should take place on the basis of FM 21-150, "Unarmed Defense for the American Soldier." Consult this manual for methods of teaching. The following techniques are recommended for inclusion in unarmed self-defense training. The instructor must remember that the content of the course should be determined by the time allotted for the whole course. A little knowledge is dangerous. Plan the course so that all instruction is thoroughly mastered.

The following references are to FM 21-150:

1. *Basic principles*.—Section II.
2. *Wrist escapes*.—Section III.

Defense against two-hand overhand grip on both wrists—Paragraph 8.

Defense against two-hand underhand grip on both wrists—Paragraph 10.



UNARMED SELF-DEFENSE FOR WOMEN

Defense against left-hand grip on right wrist or right-hand grip on left wrist—Paragraph 11.

Defense against two-hand grip on one wrist—Paragraph 13.

3. *Escapes from body holds.*—Section IV.

Two escapes from bear hug—Paragraph 17.

Escape from first rear underarm body hold—Paragraph 20.

Escape from fourth underarm rear body hold—Paragraph 23.

Escape from first overarm rear body hold—Paragraph 25.

4. *Defense against choke holds.*—Section V.

Second defense against two-hand front choke hold—Paragraph 28.

Second defense against two-hand front choke hold against wall—Par. 33.

Third defense against two-hand front choke hold against wall—Par. 34.

5. *Taking prisoners.*—Section VII.

Handling a hand-squeezing—Paragraph 41.

Ejecting a troublesome visitor—Paragraph 42.

A simple come-along—Paragraph 43.

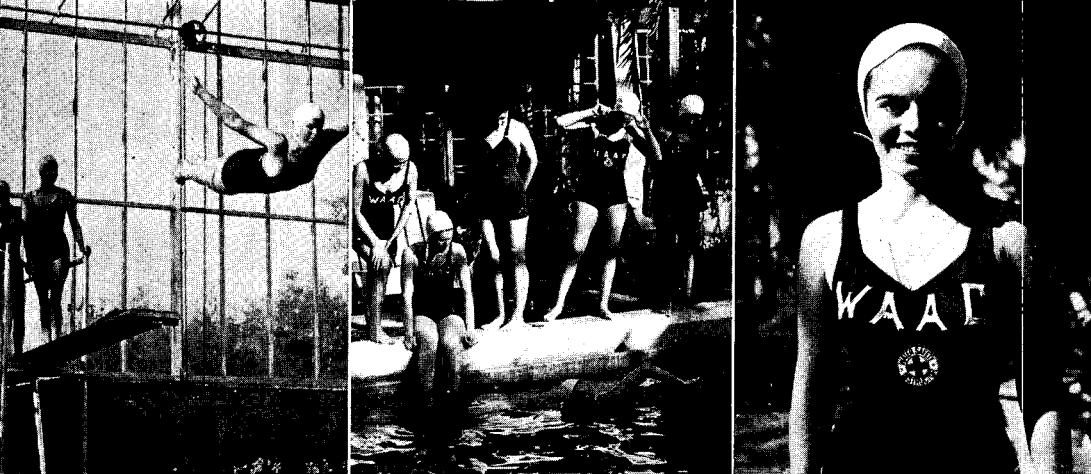
Alternate for simple come-along when meeting resistance—Paragraph 44.

Taking an approaching man prisoner—Paragraph 45.

Fingers come-along—Paragraph 46.

Lock come-along—Paragraph 47.

6. *Incapacitating an opponent.*—Section XV.



THE SWIMMING PROGRAM

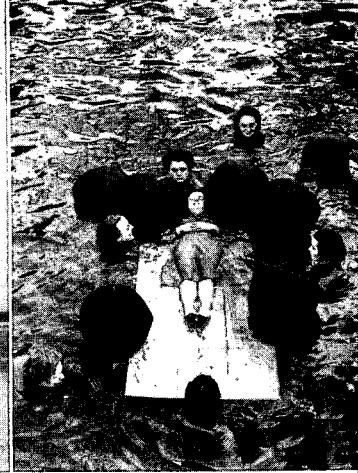
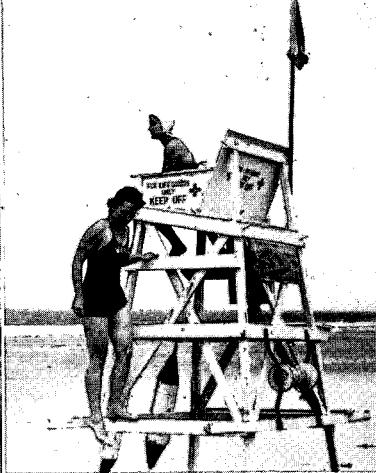
PURPOSE. Swimming is an important part of the physical-training program. It is vital to survival in the water in case of water accident or marine disaster. It has excellent recreational value in season. The fact that swimming is an excellent activity for body conditioning should not be overlooked. Whenever and wherever facilities and conditions permit, a swimming section should be incorporated in the physical-training program for every auxiliary and officer.

CLASSIFICATION OF SWIMMING ABILITY

ALL personnel upon entry into the service can be divided into three classifications as far as swimming ability, or lack of it, is concerned.

1. *Nonswimmers*.—Those having no swimming ability whatsoever.
2. *Skilled swimmers*.—Those who are truly "seaworthy," employing recognized strokes and styles of swimming, comfortably and effectively.
3. *Novice swimmers*.—All the remainder who, in water ability, are between the nonswimmer and the skilled swimmer, at varying levels of aquatic skill.

No over-all estimate of the percentage of the whole involved in each classification can be made because of the great variation that will be found in initial skill, but it is safe to assume that a considerable majority of the personnel will be either nonswimmers or novices. A program of swimming and water-safety instruction must be established, therefore, suitable to the needs of each classification, and



it should be so arranged that learners can progress from one classification to another as they master the skills in each phase.

ORGANIZATION FOR INSTRUCTION

SWIMMING INSTRUCTORS. Swimming instructors should be qualified American Red Cross Water Safety instructors, and should be provided with Red Cross textbooks, instructor's manuals and guides, and test and certification materials.

NOTE.—These may be obtained without cost for use of water safety instructors upon application to the American Red Cross Field Director stationed at any post.

GROUP CLASSIFICATION. Each group should be classified according to ability, and instruction groups should be formed in each classification. A system of self-classification may be used in each group which is not only effective but is the means of saving the time which would ordinarily be used in classification tests. Briefly, it is nothing more than an announcement by the instructor at the beginning of the course that all nonswimmers in the group move out of ranks to form a unit of their own; then, that all skilled swimmers perform a similar detachment operation. The group remaining constitutes the novice classification. Actual operation of this plan indicates that many novices at the lower level of novice skill will classify themselves as nonswimmers and that some semiskilled swimmers will automatically place themselves in the novice class, a helpful tendency in each instance.

For mutual aid and safety, the "Buddy" system should be used in all class periods.

NOTE.—For description of system, see pp. 54-55, Red Cross Life Saving and Water Safety Textbook.

TIME ALLOTMENT FOR SWIMMING. Whenever possible, daily swimming instruction periods should be scheduled, since continuity is a desirable factor in the learning process. Certainly, training should be not less than three periods or sessions per week.

INSTRUCTION FOR NONSWIMMERS

OVER-ALL OBJECTIVE. The over-all objective of the *non-swimmer* instruction is to get the nonswimmer afloat and water-borne, and navigating under her own power as quickly as possible and with a minimum of difficulty. The rate of progress, however, must be consistent with mastery of the fundamental principles of swimming which are best begun at this level. These are: (1) Use of buoyancy; (2) breath control and breathing; (3) relaxation; (4) balance; (5) swimming and floating positions; (6) fundamental propulsive strokes.

It is recommended that the American Red Cross Beginner's Course be used to attain these objectives.

NOTE.—For reference see pp. 30-46, Red Cross Instructor's Manual for Swimming and Diving Courses.

SKILLS TO BE ACHIEVED. This course contains the following major elementary skills:

- | | |
|---------------------------|---|
| 1. Breath holding. | 9. Finning. |
| 2. Rhythmic breathing. | 10. Combined stroke (front) human stroke. |
| 3. Prone float. | 11. Combined stroke (back). |
| 4. Prone glide. | 12. Change of direction. |
| 5. Back glide. | 13. Turning over. |
| 6. Kick glide (on front). | 14. Jumping into waist-deep water. |
| 7. Kick glide (on back). | 15. Jumping into deep water. |
| 8. Armstroke (beginner). | |

For complete description of listed skills see page 15, chapter II, Red Cross Swimming and Diving Textbook, "Learning How to Swim."

The course finishes with two combined tests in which are incorporated many of the above-listed skills.

NOTE.—For description of this, see pp. 45-46, Red Cross Instructor's Manual for Swimming and Diving Courses.

RESULT OF BEGINNER'S COURSE. The end result of the Beginner's Course is not only to get the nonswimmer afloat and navigating with some degree of ease in deep water. If the fundamental principles of support and propulsion are well-learned, the nonswimmer at the conclusion of the course, should be able to remain afloat for a half-hour or more and propel herself for a considerable distance.

If formal instruction for the individual has to end at this point, and time permits, additional practice may be given in swimming partially and fully clothed, and in the use of auxiliary floating supports.

NOTE.—See Red Cross Instructor's Guide for Functional Swimming and Water Safety Training, "Shirt-tail life saving."

INSTRUCTION FOR NOVICE SWIMMERS

NOVICE SWIMMERS are novices for one of two reasons; either they have had insufficient instruction and practical experience in the water, or they are self-taught. In either case they are, and will remain, novices because they have not mastered the fundamental principles upon which effective swimming is based. At the same time, they have eliminated fear of the water, and do possess some crude aquatic skill.

In order that the novice group may truly learn the fundamental principles of use of buoyancy, breath-control and breathing, relaxation, balance, and effective swimming and floating positions, it is recommended that all novice swimmers be given the American Red Cross *Beginner's Course* training.

COURSE CONTENT. The course content should not differ in detail from that given to nonswimmers. However, novices will accomplish the skills listed in a much shorter time than nonswimmers. Therefore, as soon as the listed skills are mastered and the fundamental objectives attained, the remaining class hours allotted to swimming instruction may be utilized for more advanced instruction in preparation for Functional Swimming and Water Safety training which should follow.

FURTHER INSTRUCTION for novice swimmers should consist largely of effective learning and use of a recognized style of swimming on the front, such as the breast stroke or side stroke. Either or both of these styles of swimming are basic for wartime use, because of their all-around utility and fundamental value. This should be followed by learning the elementary back stroke as a relief or "change-over" style of swimming. If one or more of these are mastered, a long stride will have been taken preparatory to learning Functional Swimming and Water Safety.

NOTE.—For full description of stroking movements and styles of swimming above, see Red Cross Swimming and Diving Text-book. The following references are to the text.

	<i>Pages</i>
1. Scissors kick.....	75- 79
2. Breaststroke kick.....	85- 86
3. Armstroke on side.....	87- 94
4. Armstroke on breast.....	95- 97
5. Elementary backstroke.....	100-104
6. Breast stroke.....	104-114
7. Side stroke.....	117-121

Rather more extensive practice in clothed swimming and use of auxiliary flotation devices should be given to the novice group toward the conclusion of their training than would normally be given to those starting as nonswimmers.

At the conclusion of this course of training, novices should be well on the way toward becoming skilled swimmers. Even if training has to be interrupted at this point, personnel having had the training will be far better equipped to take care of themselves in the water than they were as novices.

FUNCTIONAL SWIMMING AND WATER SAFETY TRAINING PROGRAM

IT IS NOT ENOUGH for wartime use merely to be able to swim; even skilled swimmers require additional training in the kinds of aquatic skills which have proved to be most useful in and effective for situations and conditions likely to be met in service operations.

It is recommended, therefore, that training sections in Functional Swimming and Water Safety be established for the skilled swimmer group and for beginners and novices after they have become semi-skilled as a result of their training in the courses previously outlined.

DIVISION OF SECTIONS. The course is divided into four sections and is so progressively and cumulatively arranged that, at its conclusion, the trainee has become not only versatile but extraordinarily competent in the water.

BASIC AQUATIC SKILLS. The first phase of training is made up of eight basic aquatic skills which serve as the foundation for subsequent variations and adaptations taught. They are all important because of their utility. The basic skills are:

- | | |
|--|--------------------|
| 1. Floating. | 6. Treading water. |
| 2. Breast stroke. | 7. Jumping. |
| 3. Side stroke. | 8. Diving. |
| 4. Elementary backstroke. | |
| 5. Submersion and underwater swimming. | |

The styles of swimming selected are all strong, energy-conserving and have a variety of uses.

USEFUL VARIATIONS. The second phase of training is composed of *useful variations* of swimming skills. These are:

- | | |
|--|--|
| 1. Swimming and floating in a restricted area. | 5. Swimming with legs and one arm. |
| 2. Swimming with head high (use in oil or debris). | 6. Swimming with legs alone. |
| 3. Swimming silently. | 7. Plunge diving. |
| 4. Swimming with splash recovery (useful and practical for swimming through ignited oils of some types). | 8. Leaping from heights feet foremost. |

APPLICATION OF SKILLS. The third phase of training embraces *application of skills* to possible service conditions and situations.

- | | |
|--|--|
| 1. Swimming fully clothed. | 4. Leaping from heights fully clothed. |
| 2. Swimming with equipment. | |
| 3. Swimming under water fully clothed. | |

PERSONAL SAFETY IN WATER. The fourth phase of training is concerned wholly with elements which contribute to personal safety in the water, and with means of rescue and resuscitation.

1. Release of leg cramps.
2. Taking off clothes in deep water.
3. "Shirt-tail" life saving (use of articles of clothing and certain types of equipment as floating auxiliary supports).
4. Tired swimmer carry.
5. Wrist tow.
6. Collar carry.
7. Resuscitation by the prone pressure method.

ACHIEVEMENT TESTS. At the conclusion of the Functional Course a series of tests are given to measure achievement of each person completing the course. Following are the test items:

1. 200-yard swim fully clothed.
2. 10-minute swim, float, tread water in a restricted area fully clothed.
3. 50-yard swim on back, fully clothed.
4. 15-yard underwater swim, fully clothed.
5. Disrobing and 5-minute float.
6. 20-yard carry, with rescuer and victim fully clothed.

The American Red Cross has prepared and printed an instructor's Guide for a Functional Swimming and Water Safety Training Course, A. R. C. 1059, which it will furnish to Water Safety Instructors giving this type of training. In it, the items listed above are described fully, as well as uses to which the various skills are put.

LENGTH OF COURSE. It has been determined that the average swimmer will need *20 hours of instruction, training, and practice* to cover the content of the course. Skilled swimmers in the upper bracket of performance will require less time, and the lower bracket of semiskilled swimmers may need a few hours more.

SWIMMING FOR RECREATION

NO FORMAL PROGRAM is suggested for recreational swimming and bathing, because of diversity of interest among participants. Some organization is essential, however, to insure a maximum of safety to the bathers.

SAFETY ELEMENTS

1. It should be ascertained first that the water meets safe hygienic requirements with regard to harmful bacteria load.
2. Bathing areas should definitely be delimited either by marking or by instruction of the bathers, as to where they may bathe and how far they may venture.
3. Bathing areas should be selected with care and established where there is an absolute minimum of hazard consistent with the natural features of the body of water of which they are a part.
4. Improvised or other safety and rescue equipment should be placed in each bathing area according to need.
5. All recreational bathing and swimming should be at specified hours in the day.
6. Each bathing area while in use should be supervised by Red Cross trained lifeguards.
7. It is strongly recommended that the "Buddy" system be used for all bathers and swimmers when in the water, for mutual aid and protection.

NOTE.—For complete information of safe bathing areas and their organization, equipment, and supervision, see Chapter II, "Bathing Places," American Red Cross Life Saving and Water Safety Textbook.

SWIMMING REFERENCES

1. Swimming and Diving, American Red Cross, Blakiston, 1937.
2. Life Saving and Water Safety, American Red Cross, Blakiston, 1937.
3. Life Saving and Water Safety Courses—Instructor's Manuals, American Red Cross, ARC 1030, March 1938.
4. Swimming and Diving Courses—Instructor's Manual, American Red Cross, ARC 1042, February 1939.
5. Instructor's Guide in Functional Swimming, American Red Cross, ARC 1059, February 1943.



ATHLETIC RECREATION

ATHLETIC RECREATION should play an important part in the physical training program, since it provides the means for additional body conditioning on a voluntary basis.

Since recreation is wholly voluntary, the instructor must lead rather than teach. A recreational leader must be friendly and enthusiastic. She should be familiar with the games and sports included in the program. She should show initiative and ingenuity in providing or improvising equipment.

Full use should be made of all available recreational facilities both on the post and in the community. Materials and equipment may often be secured through the cooperation of such agencies as the following:

Physical Training Departments at WAC Training Centers, Service Command Headquarters, Special Service Office, The Red Cross, U. S. O., Y. W. C. A., Y. M. C. A., Community Clubs, Churches.

RULES FOR CONDUCTING GROUP RECREATION

1. Give rules and directions for games clearly and simply.
2. Stand where you can be seen and heard easily. Never stand in the center of a circle or between two lines where your back would be to some of the participants.
3. Never use military commands to secure the attention of the group.
4. Do not repeat directions unless the majority of the players fail to understand.
5. Ask one group to wear service hats if it is necessary to distinguish between groups.
6. Always make arrangements in advance for music if it is needed.
7. Plan games so that each member of the group may be assured active participation and personal enjoyment.



8. Always begin a new activity before interest wanes.
9. Encourage friendly rivalry.
10. Plan programs to feature the games most enjoyed on previous occasions, as well as to introduce new games.
11. Always start a program with a familiar and popular game.
12. Encourage participants to direct activities and develop leadership.

CONDUCTING TEAM SPORTS

1. Inform all participants, officials, and spectators of the time, place, and event in advance.
2. Try to match teams according to ability so as to insure competition.
3. Arrange all necessary equipment in advance and place it at the disposal of the players.
4. Designate one person on each team to be responsible for the equipment.
5. Encourage friendly rivalry by planning tournaments.

TYPES OF ACTIVITIES

MANY types of activities can be included in a recreational program. Such a program should include a variety. References to such activities may be found at the end of this chapter.

MIXERS

A "MIXER" is an introduction game. It is an excellent game to start any recreational program, particularly for a group which is not well acquainted.

1.

Name: Circle introduction.

Formation: Double circle.

Action: A march is played as the inside circle moves in one direction and the outside circle moves in the opposite direction. When the music stops,

the circles face, and each person introduces herself to the person opposite. When the music starts again, each circle continues marching in the original direction and the game continues as above.

Music: Any marching music.

2.

Name: Paul Jones.

Formation: Partners join hands in a single circle.

Action: 8 slides right, 8 slides left, 4 skips or walks into the center of the circle, 4 out, 4 in, and 4 out. Partners join hands (right) and continue around the circle with the grand right and left until the music stops. Everybody should end up with a new partner.

Music: Turkey in the Straw, Pop Goes the Weasel.

3.

Name: Partner mixer.

Formation: Double circle.

Action: Walk forward 4 steps holding partner's hands. Face partner. Boys' backs to the center of the circle, girls facing the center of the circle. Walk backward away from partner for 4 steps. Boys point both hands toward girl ahead of his first partner; girls point both hands toward boy behind her first partner. Walk 4 steps toward person to whom you are pointing. Hold both hands of new partner. Walk 4 steps, turning around with new partner. The action may be repeated as many times as desired, changing partners each time. The mixer may be made more interesting by starting it slowly and increasing the tempo each time the action is repeated.

Music: Glow Worm.

Words:

- (1) Walk two, three, four.
- (2) Back two, three, four.
- (3) Point two, three, four.
- (4) Turn two, three, four.

SINGING GAMES AND FOLK DANCES

SINGING games and folk dances are always popular. They are an excellent means of producing group spirit and are enjoyed by all.

1.

Name: Oh Susanna.

Formation: Partners join hands in a single circle.

Action: Numbers correspond with those on song lines.

1. Drop hands. All ladies walk 4 steps toward the center of the circle and 4 steps backward to place.
2. Men do the same (4 steps forward, 4 steps backward).
3. Repeat 1.
4. Repeat 2.

5. Grand Right and Left around the circle until the words, "Susanna, don't you cry," are sung the second time.
6. On the word "cry," each man takes the nearest lady for his newest partner. They cross hands skating fashion and skip around the circle counterclockwise (the direction of the men), the men on the inside, the ladies on the outside. Finish in a single circle just before the end of the chorus so that the lady is on the right of her new partner and repeat the dance as often as desired. All those who find themselves without partners should step to the inside of the circle. There they will find others without partners with whom they may join hands and reenter the circle.

Music: Oh Susanna.

Words:

1. I come from Alabama wid my banjo on my knee,
2. I'm going to Louisiana, my Susanna for to see.
3. It rained all day the night I left,
De weather was so dry,
4. De sun so hot I froze myself,
Susanna, don't you cry.
5. Oh Susanna, now don't you cry for me,
For I come from Alabama wid my banjo on my knee.

2.

Name: Skip to My Lou.

Formation: Partners join hands in a single circle.

Action:

1. Boys 4 steps to center and back. Repeat.
2. Girls 4 steps to center and back. Repeat.
3. Swing partners 2 times around with right hand.
4. Swing neighbor 2 times around with left hand.
5. Hold hands with partner, as in skating, and promenade counterclockwise, boys on the inside of the circle.
6. Girls continue, boys turn right and face and move in opposite direction.
7. Get the nearest partner and promenade until music is finished.

Music: Skip to My Lou.

Words:

1. Boys to the center, skip to My Lou (3 times); Skip to My Lou, my darling.
2. Girls to the center, skip to My Lou (3 times); Skip to my Lou, my darling.
3. Swing your partner, skip to My Lou (3 times); Skip to my Lou, my darling.
4. Swing your neighbor, skip to My Lou (3 times); Skip to My Lou, my darling.
5. Promenade all and skip to My Lou (3 times); Skip to My Lou, my darling.

6. I lost my partner, what shall I do? (3 times); Skip to My Lou, my darling.
 7. I'll get another one good and true (3 times); Skip to My Lou, my darling.
- 3.

Name: WAC'S from an Army Post.

Formation: Double circle, men on inner circle, ladies on outer circle, partners facing with about 2 feet between couples.

Action: Numbers correspond to those on song lines.

1. At the word "WAC's", clap hands once and all move forward about 4 steps, partners passing right shoulders.
2. All move backward 4 steps into place.
3. All swing partners. (From waltz position, turn clockwise, lady a little to her partner's right, pivoting on the right foot, which is shifted only slightly.)
4. Stand at attention.
5. Swing your partner.
6. Face partner, salute and turn to the right, moving toward new partner.
7. Bow to new partner who has just stepped into place.
8. Swing new partner, and finish up facing partner, ready to begin again with (1).

Music: Captain Jinks from the Horse Marines.

Words:

1. Oh, we're the WAC's from an Army Post.
2. We work the hardest and play the most.
3. We know we're good, don't mean to boast,
4. But that's the style in the Army.
5. We teach the ladies how to march, how to march, how to march.
 We teach the ladies how to march,
 For that's the style in the Army.
6. Salute your partner, turn to the right,
7. And greet your neighbor with great delight;
8. Then swing her around with all your might,
 For that's the style in the Army.

4.

Name: Virginia Reel.

Formation: Arrange the players in groups of five or six couples in two parallel lines, partners facing each other.

Action: Everyone in both lines moves forward 3 steps and backward 3 steps in each of the first 6 movements.

1. Come to center and bow.
2. Meet partner, swing around using right hands.
3. Meet partner, swing around using left hands.
4. Meet partner, swing partner around with both hands.
5. Meet partner, do-si-do. Passing right shoulders, go around each other back to back at center.

6. Meet partner, do-si-do. Passing left shoulders, go around each other back to back at center.
7. The partners opposite each other at the head of the lines are the lead couple. They swing partner with right arms locked. Other couples remain in place.
8. Swing first one of partner's line, left elbows locked.
9. Swing partner, joining right elbows.
10. Swing second one of partner's line, left elbows locked.
11. Swing partner.

This continues until each of leading couple has swung each one in her partner's line. Leaders then slide down center, hands joined, to their places at the head of their own lines. Each one heads her own line, turns away from center and skips, followed by the rest of the line, back to the place of the last couple in the group. There head couple joins hands, forming a bridge, under which all pass with partners. First pair to go under take original position of the head couple who remain where they formed a bridge, thus taking the position of the last couple. The reel is started from the beginning now and is continued until all persons have been at the head of the lines. The players clap hands in time to the music when not moving.

Music: Turkey in the Straw, Pop Goes the Weasel, or Whistling Rufus.

GAMES WHICH DO NOT REQUIRE EQUIPMENT

THERE are many opportunities to play games with large groups when there is absolutely no equipment available. The following games need nothing more than individual energy:

1.

Name: Chinese Tag.

Formation: One player is "it." Other players are scattered.

Action: "It" chases the other players, attempting to catch one of them. The person tagged, placing her hand on the place where she was tagged, proceeds as "it." Each "it" must hold such position until she tags another person.

2.

Name: Partner Tag.

Formation: Hands joined with a partner.

Action: One set of partners is "it." They must run and tag some other set, without letting go of hands. As soon as they successfully tag another set, the new set is "it." Any pair being chased must not break their hold. If they do, they automatically become "it," even though they aren't tagged.

3.

Name: Streets and Alleys.

Formation: All but two of the players stand in parallel lines, one behind the other, and clasp hands across in long lines.

Action: The director will call either the words "streets" or "alleys" at different intervals during the game. When the director calls "streets," the

players will all face in the same direction and clasp hands forming lines. When the director calls "alleys," the players drop hands, make a quarter turn to the right and form lines in that direction by clasping hands. These two formations are the only ones the players take during the game. The two players not taking part in the formation are called the chaser and the runner. At the signal of the director, one of the players chases the other and attempts to catch her. The two players must run only in the lanes. The sudden changes of directions makes the game very entertaining. This is continued until the chaser tags the runner. The runner and chaser then choose others from the lines to take their places.

4.

Name: **Fox and Squirrels.**

Formation: Groups of threes (two trees facing each other and one squirrel inside the tree). There should be two extra players—one fox and one squirrel.

Action: The fox chases the free squirrel around the territory, attempting to tag her. Squirrel may run into any tree for shelter, and the squirrel who is there must then leave and become "free squirrel." Should the fox tag the free squirrel, they change places, the fox becoming the free squirrel and the free squirrel becoming the fox. Every few minutes, change people around. The trees become squirrels and the squirrels become trees.

5.

Name: **Catch the Caboose.**

Formation: Squads.

Action: Each member of a squad takes hold of the waistline of the player in front of her. Members represent a train, with the last member acting as a caboose. First member of the squad faces the group and acts as "bum," whose object is to catch a ride on the caboose. This member runs around; and if successful in catching hold of the caboose, becomes the caboose and the first in line becomes the "bum."

6.

Name: **Hook On.**

Formation: Groups of three (one girl behind the other with hands on hips of girl in front).

Action: On the signal to go, the sets of threes chase each other. The object is to hook on to another set, and still prevent anyone from hooking on to one's own set. The game becomes exciting as the sets grow in length. Should the line break at any time, it must stop and permit the broken end to back on. At the finish, the last three girls in the longest line are the winners.

7.

Name: **Gas Area.**

Formation: Circle.

Action: Put hats in center of circle. Holding hands, try to pull others so they touch hats—anyone who touches a hat is a casualty. Continue until only one survives.

8.

Name: Black and White.

Formation: The players form two parallel lines about 2 feet apart facing forward. One line is called "black" and the other line "white," each having as its goal the wall nearest it.

Action: When the director calls "black," all the players in that line run to their goal and the "white" try to tag them. Any players that the "whites" tag are taken to their side. In the same way when "white" is called, they must run for their goal. The game is to see which side has more players at the end of a certain time.

9.

Name: Three Deep.

Formation: All the players except two form in a double circle, facing inward; that is, in two concentric circles, with one player directly behind another. The two not in the circles, one of whom is runner and the other the chaser, start outside of the circle, one of them being on one side of the circle and the other opposite.

Action: The object of the game is for the chaser to tag the runner. The runner may save herself by stopping in front of any couple standing in the circle. Thereupon, that file having been made "Three Deep," the outer player or third woman becomes at once liable to tagging, and in turn becomes runner and tries to evade the chaser. It is permissible for her to seek refuge in front of the couple standing immediately on the right or the left.

GROUP GAMES WHICH REQUIRE EQUIPMENT

MANY simple games can be played with equipment which is available on most posts.

1.

Name: Steal the Bacon.

Equipment: Tenpin, bottle, or any object.

Formation: Two lines or more face each other approximately 8 feet apart. Tenpin, bottle, or object used is centered between the lines.

Action: Number off from opposite end of each line. Leader calls a number and the player so called from each side runs to the center and tries to "steal the bacon" and get home with it before the other one touches her. A point is given to the side whose player either gets home safely with the bacon or touches her opponent who has taken the bacon.

2.

Name: Circle Dodge Ball.

Formation: Single circle with several players inside the circle.

Equipment: Volley ball or rubber ball.

Action: In this game, the players on the outside of the circle try to hit, with the ball, the players on the inside of the circle who are trying to dodge the ball. When a player is hit, she takes her place outside the circle and helps to hit the others. The last one remaining inside the circle is the winner.

3.

Name: **Field Dodge Ball.**

Equipment: Volley ball or rubber ball, a home plate, and a stationary object in the middle of the field which must be suitable for the players to circle while running.

Formation: The fielding team is scattered over the field from about 10 feet in front of home plate back to the stationary object which should be placed about 30 or 40 feet from the home plate.

Action: The ball is thrown into the field by the runner, who immediately runs around the object in the middle of the field and back to home plate. If the thrown ball is caught before touching the ground, the runner is out. If the ball is not caught, the fielders try to hit the runner with the ball. Fielders may not run with the ball in their hands but may pass it from one to another to get a closer throw at the runner. The object is to see how many runs a team can make by giving everyone a chance to be the runner.

RELAYS

RELAYS are an easy way to quickly organize a large group into a game in which everyone plays an active part.

1.

Name: **Walk-Run-Skip-Hop Relay.**

Formation: Line relay formation.

Action: A line is drawn about 15 paces in front of the starting line. On the signal to go, the first person in each file walks to the given point and walks back again, touching hand of number 2. Number 2 in each file runs up and back. Number 3 skips up and back. Number 4 hops up and back. The same routine is repeated until every person has been up and back. It must be remembered that each person does a different activity. Have squads number off from front to rear in sets of 4 so that each is sure of her activity. First file to finish wins.

2.

Name: **Animal Relay.**

Formation: Line Relay Formation.

Action: No. 1 person waddles like a duck; No. 2 hops like a rabbit. No. 3 runs on all fours—and repeat. Each runs back and touches next person in file. First file to finish wins.

3.

Name: Heel-Toe Relay.

Formation: Line Relay Formation.

Action: On the signal to go, the first person in each squad starts moving by placing one foot directly in front of the other so that the heel of the advancing foot touches the toe of the other foot. By this slow method she returns to the file, touching hand of number 2, who proceeds with the heel-toe method. This procedure is continued until everyone in the file has taken her turn. First file to finish wins.

4.

Name: Sore Toe Relay.

Formation: Line Relay Formation.

Action: On the signal to go, the first person in each file takes hold of her toe with one hand and runs to the given line. As soon as she reaches it, she may let go of her toe and run back to tag the next person in file, who repeats the same procedure. The first file to finish wins.

5.

Name: Pick-Up Relay.

Formation: Line Relay Formation.

Action: On the signal to go, the leader of each file runs to the designated line and back. She takes hand of the second person in file and they both run up and back. This continues on down the file until they have picked up every person in the file and all are at the designated line, in file formation. The first line to finish wins.

ADDITIONAL SPORTS

A NUMBER of active sports are considered desirable for women. These are not described in this manual since rule books may easily be obtained. Field Manual 21-220 "Sports and Games" may also be consulted. These sports include basketball, softball, speedball, soccer, hockey, ice skating, tobogganning, table tennis, badminton, volleyball, shuffleboard, horseshoes, etc.

TOURNAMENTS

TOURNAMENTS should be introduced in the program occasionally to encourage friendly competition and promote participation and interest in activities.

The elimination tournament is the most common and the most used type of tournament. Any number of teams or individuals may

enter such a tournament. It is an excellent way of caring for a large number of people who are eager for competition.

Elimination Tournament: A bracket may be made up of 4, 8, 16, 32, or 64 teams. If there are more than 4 or less than 8 teams entered in the tournament, an 8-bracket tournament should be used. Likewise, if more than 8 and less than 16 teams are entered, a 16-bracket tournament should be used and "byes" used in the vacant lines. A team which has to play a "bye" automatically moves into the next round of play. The two teams which draw places together will play. The winner will play the winner of the next two games, etc., until the team reaching the last round is winner of the tournament.

A Round Robin Tournament is used for a fairly small number of teams. Each team is scheduled to play every other team entered in the tournament. The winner will be the team winning the most number of games.

A Ladder Tournament is a continuous tournament. It may be continued as long as there is any interest. The names of individuals or teams are placed one under the other. Any team may challenge either of the two teams directly above but none below its position on the ladder. If the team which is challenged wins, it remains in the same place. If the challenging team wins, it moves up to take the place of the loser. The team or individual that is on top of the ladder at the end of the tournament is the winner.

EXPLANATION OF FORMATIONS

A SUCCESSFUL recreational leader has at her fingertips the knowledge of many group formations. The following descriptions include only the simplest of formations:

1. Single Circle:

a. Facing the center of the circle, players stand side by side. When there are couples, the lady is on the gentleman's right (this can be remembered easily by the phrase, "The lady is always right").

b. Facing clockwise around the circle, players are standing one behind the other facing in the same direction that the hands of the clock move.

c. Facing counterclockwise around the circle. Players are standing one behind the other facing in the direction opposite to that in which the hands of a clock move.

d. Partners facing. Boys face counterclockwise—girls face clockwise.

2. Double Circle:

a. Facing the center of the circle. This formation is similar to the single circle except that now there are two concentric circles—one circle inside the other. Both circles may be facing the center or circles may be facing each other, or the circles may be going in the opposite direction.

b. Facing clockwise around the circle. Partners stand shoulder to shoulder facing the direction in which the hands of a clock move. If there are couples, the lady is on the inside circle and the gentleman on the outside circle ("The lady is always right").

c. Facing counterclockwise around the circle. Partners stand shoulder to shoulder facing in the direction opposite to that in which the hands of a clock move. If there are couples, the lady is on the outside circle and the gentleman is on the inside circle ("The lady is always right").

3. Line Formations. Two lines, partners side by side, may all be facing in the same direction.

4. Grand Right and Left. A single circle with partners facing and right hands joined. Boys proceed around the circle in a counterclockwise direction; girls proceed around the circle in a clockwise direction. Partners pass each other dropping hands and joining left hands with the next person in the circle. Each passes by the next person and joins right hands with the following person. The players continue in this manner, joining alternate hands with each person they meet. A grand right and left may be continued until partners are together, until the music stops, or until the players return to their original places.

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RESPONSIBILITY FOR THE PROGRAM

PHYSICAL TRAINING STAFF

THE physical training staff will be charged with the conduct of teacher training—officers and cadre members.

The conduct of the physical training program for auxiliaries in training will be supervised by the physical training staff. They will make suggestions to the proper echelon for the improvement of the conduct of the program.

COMPANY COMMANDER

THE company commander is responsible for the conduct of the physical training program in her company. All company officers will be familiar with and be able to teach the physical training program.

In the training center they will be supervised by the physical training staff in this work.

In the field there will be general supervision to insure correct and adequate conduct of the program.

CADRE MEMBERS

NONCOMMISSIONED personnel capable of teaching should be encouraged and permitted to teach under the supervision of the company officers. No cadre member should teach unless she has been given thorough training and is supervised by an officer.

ENROLLED PERSONNEL

IN THE final analysis every woman is responsible for her own physical fitness. Enrolled personnel should be stimulated at all times to realize their responsibility and to act upon it. This does not relieve the physical training staff, company commanders or cadre members of their responsibility. It will, however, prove to be of great assistance to them in the fulfillment of the program.



PLANNING THE PROGRAM

PLANNED exercise means systematic exercise. It results in systematic development. Haphazard exercise brings haphazard results.

Conviction of the necessity for increased physical fitness is a prerequisite for purposeful exercise. This is the necessary first step.

Clear and understanding vision of a constructive and systematic plan for achieving physical fitness is the second step.

Knowledge of the practical and intangible results of increased fitness is the third step.

An unswerving desire to maintain the acquired gains in physical fitness is the fourth, last, and most important step. Without it, the other three steps are useless. Physical fitness demands constant and regular care.

THESE ARE THE PHYSICAL TRAINING ACTIVITIES

POSTURE IMPROVEMENT

BODY CONDITIONING

CADENCE SERIES

STRENGTH EXERCISES

FOOT EXERCISES

**BODY MECHANICS OF EVERYDAY AND
MILITARY ACTIVITIES**

**AGILITY, COORDINATION AND
BALANCE ACTIVITIES**

MARCHING EXERCISES

SELF-TESTING ACTIVITIES

DAILY EXERCISE SERIES

RELEASE OF TENSION ACTIVITIES

FUNCTIONAL SWIMMING

UNARMED SELF-DEFENSE

RECREATION

WHEN TO USE THEM

BASIC TRAINING

THE emphasis in basic training will be placed on aiding the woman to change from civilian to military life in the shortest time with the greatest safety. Five hours weekly will be spent on the physical conditioning of the women. This time will be used for concentrated work on posture, body conditioning, and body mechanics. Recreation is very valuable during this time. It is not, however, of such a nature as to contribute to systematic development of the body and all effort should be made during this period of training to throw the responsibility for maintaining physical fitness squarely up to each woman. This is the proper place for this responsibility if it is to carry itself in months to come.

SPECIALIST TRAINING

THE emphasis is toward furthering her adjustment to military life and aiding her to retain the benefits gained in basic training. Five hours weekly will be spent on the physical conditioning of the women. A physical training program will consist of further work on posture and systematic development of the body plus as much recreation as successful completion of the above dictates. Whenever facilities permit, functional swimming and unarmed self-defense will also be offered. Exercises for the release of occupational tension will be offered for the women's use. These exercises will naturally vary with the specialist training they are taking.

OFFICER TRAINING

EVERY officer candidate will be instructed in the methods and materials of physical training. She will become able to demonstrate and instruct in the basic body conditioning course. She will become able to plan and conduct recreation of all types. She will become proficient in recognizing and correcting poor posture.

OFFICERS

IT IS every officer's responsibility to keep herself fit. The standard she sets will establish the standard of her unit.

HOW TO KEEP UNITS FIT IN THE FIELD

FIELD TRAINING

FIFTEEN minutes a day will be spent on furthering and maintaining the physical condition of the women through body conditioning exercises. Recreation will play an important part in the all around program, but these 15 minutes will be devoted to posture correction, body conditioning, and special exercises for the release of occupational tension.

The daily exercise series is designed to be used in this 15-minute period. There is no excuse for lack of physical condition due to hours of work or type of occupation. The daily exercise series may be done by a woman singly or in small groups. The time requirement may be met at any time during the day or evening. Progress should be reported to the officers in charge. The officers are responsible for the stimulation and carrying out of the program. This method should only be used where large groups may not be assembled. There is great psychological benefit and stimulation in mass participation.

It is essential that exercise takes place daily. A greater number of periods of exercise of shorter duration are more effective than fewer longer periods.

Recreation should include such things as organized sports of all kinds, dancing, hiking and camping, swimming, unarmed self-defense, and all other available activities.

OVERSEAS UNITS

FUNCTIONAL swimming and unarmed self-defense will be offered to every woman preparing to go overseas. The program otherwise will be the same as that for field companies at home.

A high degree of physical fitness is even more essential for overseas companies than for companies at home. The daily exercise series makes this simple for every woman.

**PROGRAM
PLANNING
CHART**

	ESSENTIAL RECOMMENDED ADDITIONAL	BASIC	ESSENTIAL RECOMMENDED ADDITIONAL	SPECIALIST	ESSENTIAL RECOMMENDED ADDITIONAL
Posture	X		X		X
General Conditioning	X		X		X
Marching Exercises		X	X		X
Self-Testing Activities	X			X	X
Daily Exercise Series	X		X		X
Release of Tension Activities		X	X		X
Functional Swimming	X		X		X
Unarmed Self Defense	X		X		X
Recreation	X		X		X



DIFFERENT ACTIVITIES CALL FOR

POSTURE.

POSTURE should be emphasized in every physical training period, drill period, and during off-duty hours. Posture training can never leave off.

With a new group, point out the benefits of good posture. Demonstrate and describe the correct position. Diagnose the defects of the group as a whole. Point out defects individually when necessary. Assume that correction of posture is no more personal than pointing out the wrong solution to a map reading problem.

CADENCE EXERCISES

TO GAIN benefit from a cadence series correct execution of the exercises must be stressed. Once a series is taught, the women may be led through the exercises rhythmically without hesitation. Thus the series is performed as one exercise. The best performers should be allowed to lead the group with the instructor correcting the women in the class.

When one series has been mastered, progress to the next. When the four series have been mastered, use them alternately at the beginning of the lesson.

Cadence series are done in normal 4/4 marching cadence, including the transitions. Do not overemphasize transitions but keep the group together.

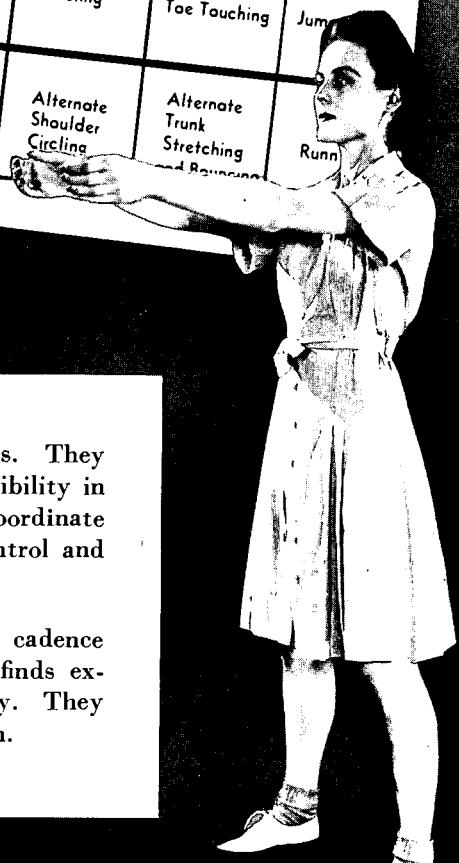
Mass commands may be used to keep the group in rhythm and to count the number of times an exercise has been performed. "Cadence—COUNT" is the command to begin counting. "Cadence—STOP" is the command to cease counting.

If conditions are not favorable for exercising in the lying down or sitting position, cadence series may be used as alternate activity. All omitted exercises from strength progressions should be presented for barracks practice and mastery.

DIFFERENT TEACHING APPROACHES

CADENCE SERIES

	ARMS SWINGING	ARMS FLINGING	HEAD	SHOULDERS	TRUNK	LEGS
SERIES 1	Arms Swinging Forward and Sideward	Single Arm Swinging Forward and Flinging Back	Head Lowering Forward and Backward	Shoulder Hunching	Trunk Springing Forward and Stretching Upward	Bouncing
SERIES 2	Single and Double Arm Circling	Double Arm Swinging Forward and Flinging Sideward	Head Turning	Shoulders Backward and Forward	Trunk Twisting and Arm Flinging	Stride Jumping
SERIES 3	Arm Swinging Forward, Sideward and Circling	Double Arm Swinging Forward and Flinging Up with Leg Lift	Head Circling	Shoulder Circling	Alternate Toe Touching	Jum
SERIES 4	Alternate Arm Swinging Forward and Sideward	Arm Swinging and Elbow Flinging	Head Swinging and Circling	Alternate Shoulder Circling	Alternate Trunk Stretching and Bouncing	Runn



Cadence series are warm-up series. They increase range of movement and flexibility in all joints. They test your ability to coordinate mind and body. They improve control and posture.

Reading across the page one finds a cadence series. Reading down the page one finds exercises for one specific part of the body. They may be used to release muscle tension.

STRENGTH PROGRESSIONS

THE strength progressions are arranged so that every woman will have a feeling of achievement as she masters each step. There are satisfying goals to achieve. The series are arranged so that no one individual need feel at a disadvantage because of age or stature.

ITEMS INCLUDED

1. Shoulder and arm strength.
2. Abdominal strength.
3. Back and neck strength.
4. Leg strength.

TEACHING TECHNIQUES

TEACH at least one exercise from each of the four progressions every day. During the first lesson present the first exercise of each progression. When the group has mastered this exercise, progress to the second exercise. When presenting a new exercise, repeat the one just learned to show progression.

The group may master the exercises from one progression faster than those of another. It is important that mastery of these exercises be as complete as possible.

When a group has mastered all the exercises from a progression review the last exercise of the series each day. Upon the teacher rests the responsibility of adequate stimulation of the group. Emphasis should be placed on the lasting qualities and enduring value of each of the last exercises. Each of these exercises presents a challenging situation in that each of the exercises can be performed a greater number of times with practice and development. This allows for stimulating interest by self-competition—by competition of groups, or individuals. Competition may take concrete form by use of a chart.

Women should get to know and feel so familiar with the exercises that they will never forget them. If this is done no woman will ever be able to say that she does not have the means at her command for keeping herself in good physical condition.

If strength progressions cannot be used outdoors it will be necessary to conduct this important part of the training on the basis of out-of-class endeavor. This calls for high organization and stimulation.

INSTRUCTOR'S GUIDE

INSTRUCTOR'S GUIDE

SHOULDER STRENGTH	ABDOMINAL STRENGTH	BACK AND NECK STRENGTH	LEG STRENGTH	FOOT EXERCISE	EVERYDAY ACTIVITIES	AGILITY BALANCE COORDINATION
Imaginary Push and Pull	A. Pleading B. One Leg Pleading	Arm Pull Back	Partner Push-ups	Sole to Sole	A. Lift B. Carry	Hand Wrestle Games
Partner Dip	One Leg Lowering	Praise Allah	Half Knee Bounce	Heel and Toe Raising	A. Push B. Pull C. Jump	Two Arm Tug Games
All Fours Dip	Two Leg Pleading	Half Swan	Full-Knee Bends Hands on Knees	Foot Circling	Two Man Carry	A. Rooster Fight B. Drake Fight C. Games
Let Down	Side Pleadings	Crossed Leg Pull	Full-Knee Bends Hands on Floor	A. Heel-Toe Pull B. Toe Gathering	Carrying Victim by Extremities	A. Crane Walk B. Duck Waddle C. Games
Knee Dip	Side Pleading With Opposite Leg Lift	Partner Elbow Resistance	Jumping	Balanced Heel Lowering	Firemans Drag	A. Crab Walk B. Squat Thrust C. Games
Half Dip	Opposite Knee to Elbow	Turn Over	Squat Jumping	Toe Pickup Tendon Stretcher	Four Man Lift	A. Balance B. Balance Walking C. Games
Full Dip	Sit-ups	Wing Lifts	Running	Variations on Walking	A. Fall B. Crawl	A. Heel Click B. Relay Races C. Games



A model first lesson is found by reading across the page. Read down the page for material contained in each section. Do not follow the lesson across the page. Place emphasis on progression and mastery. This means that the lesson plan may be arranged in any way so long as the activity is in line with known skills of the group. One exercise from each column should be included.

ADDITIONAL TEACHING TECHNIQUES

FOOT EXERCISES

AT LEAST one foot exercise should be included in every lesson. It is not essential that the foot exercises be presented in any particular order. Stress should be placed on correct walking as the best foot exercise. There may be a tendency for the standard of performance to fall off when doing foot exercises. This tendency must be eliminated. Repetition of foot exercises out of class is necessary for foot improvement.

BODY MECHANICS OF EVERYDAY AND MILITARY ACTIVITIES

THE body mechanics of everyday activities should be presented at the first opportunity after a woman arrives at a training center. This material should then be re-presented in the light of her increased muscular tone. One such activity should be presented each lesson. Everyday activities should be presented first. Practice the correct execution of these activities until this execution becomes habitual.

Material for military application—First Aid and Falling and Crawling—should be presented in the order in which it is organized in the body mechanics section. Emphasis should be placed upon the mastery of the activity.

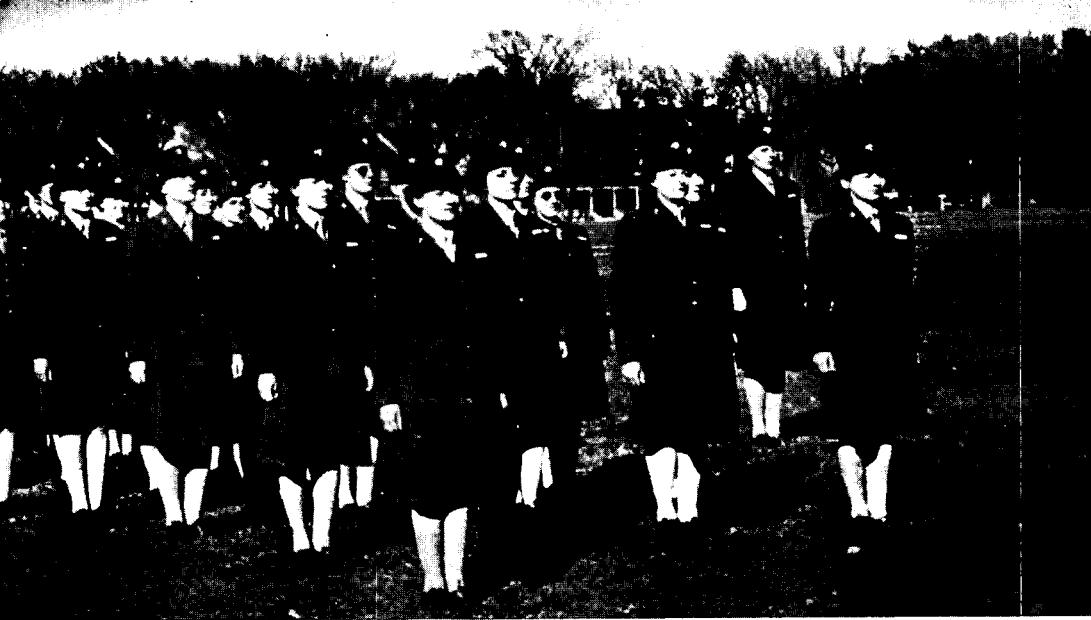
AGILITY, BALANCE, AND COORDINATION

AT LEAST one activity from this category should be presented in each lesson.

Although these exercises, games, and relay races are in the nature of recreation, they should be emphasized as abilities and skills which are necessary aids to body conditioning. The material found in this section may be supplemented by activities presented in the chapter on "Recreation" and in other standard games books. Care should be taken that activities fall within the range of skill of the majority of the women.



THE INSTRUCTOR



INSTRUCTOR'S RESPONSIBILITY

KNOW the purpose and aims of the physical training program and be convinced of its value.

Understand and be fully acquainted with the teaching content of the program.

Acquire the ability to demonstrate all exercises properly.

Make yourself an example in posture, poise, and appearance.
Do not belie your words.

Be interested in the progress of every woman and be ready to assist each woman to aid herself.

Show enthusiasm for your work. Any group will react to the standards of performance set by an instructor and the attitude she shows. The amount of effort put forth by a class will correspond to that put forth by their instructor.

Give praise where praise is due.

Use your voice to make a group respond as you desire. Determine the pitch in which your voice carries best. Generally, a low-pitched voice is more distinct and requires less effort. Practice giving admonitions that are forceful, direct, precise, and distinct. The words of a command should be enunciated clearly and with sufficient volume. Learn to fit your voice to the number of people you are attempting to reach. Practice this art indoors and outdoors.

EVERYDAY PREPARATION

YOU SHOULD:

Check on the group's progress. Choose the exercises to be presented that day. Think how you can best present the exercises so that learning will take place easily and quickly.

Practice the correct demonstration of the exercise prior to the period of instruction.

Check through the lesson to determine where posture hints, safety precautions, and practical applications of body mechanics may be fitted in to the best advantage.

Check on teaching aids, and equipment for games if there are any.

Check to see that sport clothing is neat and tidy.

ORGANIZATION OF THE CLASS

PHYSICAL training will be held outdoors whenever possible. During the winter or in inclement weather, it will be necessary to conduct classes indoors. Adequate ventilation must be provided.

Keep the group for physical training as small as possible. A platoon is the recommended size. It allows for some individual instruction. Occasionally, a company or more may be brought together in order to vary the program and aid morale. A company is massed with six paces between each platoon.

The class should form in columns facing the instructor, who commands:

1. "Extend to the left—MARCH." At this command, the women on the right flank stand fast, with arms extended sideward; all others run to their left until there is sufficient interval for each person to stand with both arms extended.

2. "Arms—DOWN."

3. "From front to rear—COUNT OFF." At this command, the leading woman of each column turns her head to the right, calls out *ONE* and faces the front. Each woman in the column calls out her number in the same manner.

4. "Even numbers, to the left—UNCOVER." At the command *UNCOVER*, those having even numbers take one jump to the left, landing squarely in the middle of the interval.

5. "Assemble to the right—MARCH." At the conclusion of the physical training period when the command *MARCH* is given, all return on the double to their original positions.

6. "In column of threes by platoons—FALL IN." This command may be used if the company is in an informal formation at the end of the period.

7. For partner work the instructor commands: "Even numbers, one step forward—MARCH." This should bring the even numbers on line with the odd numbers. "Even numbers, right—FACE." "Odd numbers, left—FACE." This will bring each woman face to face with her partner.

PRESENTATION OF MATERIAL

GENERAL RULES FOR TEACHING

DEMONSTRATE the exercise or activity while the group is at ease. This should give the group an idea of the timing of the exercise and eliminate lengthy explanation. This presentation period will be shortened if you find it possible to talk while demonstrating. When facing a group, always move to the right when commanding the group to move to the left.

The class should be kept in unison. Establish the rhythm during the first performance of the exercise and keep the group together by counting 1-2-3-4. It is preferable to use words which indicate the action being performed, as stretch, bend, up, down, etc. Straight counting on the part of an instructor tends to become monotonous. A class performing together gives the instructor a chance to observe those incorrectly doing an exercise.

During the cadence exercises, the class may be instructed to count out loud, if so desired. This practice is recommended as it involves more co-ordination of mind and body than would otherwise occur.

If a large number are performing the exercise incorrectly, stop the group and make corrections. If only a few are making mistakes, it may be possible to use admonitions while continuing to control the rhythm of the group. One example might be, "Keep-the-knees-straight" instead of "1-2-3-4."

TERMINOLOGY

COMMANDS are the means whereby a group is stimulated to respond in unison. There are two parts to every command. The preparatory part indicates the movement that is to be executed. The command of execution causes the movement to begin. A sufficient interval should be allowed between these two parts to permit full comprehension by the class.

No specific terminology has been set up for the conduct of these exercises. The instructor may use any words she desires as long as she keeps the class in unison and her words fulfill the requirements of a good command.

The following are a few suggestions for commands:

- | | | | |
|--------------------------|----------------|--------------------------|----------------|
| 1. "Feet apart..... | <i>JUMP</i> " | 6. "To dip position..... | <i>DOWN</i> " |
| 2. "Hands on hips..... | <i>PLACE</i> " | 7. "Exercise..... | <i>BEGIN</i> " |
| 3. "Arms upward..... | <i>BEND</i> " | 8. "Ready..... | <i>BEGIN</i> " |
| 4. "Trunk forward..... | <i>BEND</i> " | 9. "To a stand..... | <i>UP</i> " |
| 5. "Lying on ground..... | <i>DOWN</i> " | 10. "Cadence..... | <i>BEGIN</i> " |

The group should be stopped in unison. They must be warned in advance if exercise has a momentum factor. The normal place to end exercise is at the start position. If command "Class—*HALT!*!" is used, the "*HALT*" should be followed by two counts before ending the exercise. If "And—*STOP*" is used, the "And" falls on count preceding the final movement.

FACTORS TO BE CONSIDERED

FACTORS TO BE CONSIDERED BY THE INSTRUCTOR

PHYSICAL training classes should not be held immediately following a meal. In the summer they should not be held during the heat of the day.

A warm-up of light exercises should always be provided before strenuous activity is presented.

Strength is developed by exercising vigorously and to the point of fatigue, but never to the point of utter exhaustion.

Rest periods should be provided only when necessary.

Women are required to dress for physical training classes and participate in as much exercise as they feel able during their menstrual periods.

PERSONAL HEALTH FACTORS

DURING the menstrual period, women will participate in as much of the physical training program as they are able. Light exercise does no harm during this time and it often proves beneficial.

Cold beverages should never be taken during or immediately following the exercise period. However, cool water in small quantities will not prove harmful.

After the exercise period is over, additional clothing should be worn to keep the body from cooling off too rapidly.

A shower should be taken following exercise.

Each individual is responsible for the development and maintenance of her posture, physical strength, and endurance. If the above qualities cannot be sufficiently developed in the time allotted, it is her personal responsibility to spend additional time on her own improvement.

**YOU MUST
BE FIT**





AND WHEN IT'S ALL OVER

SOME day life will go back to normal. Some day you will return home—to the jobs and joys of peace—perhaps to marriage and families. Then you will discover that the physical fitness which helped you to weather the War will not forsake

you in Peace. Good health is an enduring asset. The habits of planned exercise—the strength, the stamina, the coordination and stability won in the ranks—will make you a more useful and happier member of tomorrow's world.

