

Physical Fitness

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SUMMARY of CHANGE

CR 3-12
Physical Fitness

- *Clarifies minor portions of text regarding Cadet Physical Fitness Test.
- *Rearranges figures' location in document to be near describing text.
- *Adds Army-style Physical Training

Effective 17 November 2018

Physical Fitness

DAVID S. BALDWIN
Major General
The Adjutant General

Official:



GRACE E. EDINBORO
Colonel, CACC
Executive Officer

History. This regulation is a minor revision to a previously published regulation.

Summary. This regulation describes the training program for physical fitness to be conducted by brigades, regiments, and units of the California Cadet Corps (CACC) as well as the directions for administering the California Physical Fitness Test.

Applicability. This regulation applies to all schools currently maintaining membership in the CACC.

Proponent and exception authority. The proponent of this regulation is the Executive Officer, CACC. The proponent has the authority to approve exceptions or waivers to this regulation that are consistent with controlling law and regulations. The

proponent may delegate this approval authority, in writing, to a field-grade man- day staff officer or State Projects Officer. Activities or units may request a waiver to this regulation by providing full justification that includes a full analysis of the expected benefits. All waiver requests will be endorsed by the senior commandant officer of the requesting activity or unit and forwarded through their higher headquarters to the policy proponent.

Supplementation. Supplementation of this regulation and establishment of command and local forms are prohibited without prior approval, in writing, from the Executive Officer, California Cadet Corps. Send a draft copy of each supplement to – Youth Programs, California Cadet Corps, ATTN: Executive Officer, Building 1301, Camp San Luis Obispo, CA.

Suggested improvements. Users are invited to send comments and suggested improvements in memorandum form directly to the address listed above.

Distribution. This publication is available in electronic media only and is intended for all levels of the California Cadet Corps organization and is authorized for public distribution. Printed copies of this publication may be provided, within budget limitations, at the discretion of the Joint Force Headquarters.

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CHAPTER 1 - GENERAL

1-1. PURPOSE.

This regulation establishes the protocols to prepare for and administer the California Cadet Corps Physical Fitness Test.

1-2. OBJECTIVE.

The objectives of the CACC Physical Fitness Testing Program are for each individual Cadet to:

- Comply with California Department of Education Physical Fitness testing requirements
- Perform to the fullest of their potential in each area of the test
- Improve the overall personal health and wellness and establish lifelong habits of wellness in each Cadet.

1-3. AUTHORITY.

- a. Section 508 of the California Military and Veterans Code states that the California Cadet Corps shall train in accordance with appropriate U.S. Army Manuals.
- b. Fitnessgram, a Manual by the Cooper Institute, governs the administration of Physical Fitness Testing conducted by the California Cadet Corps.

1-4. GENERAL.

- a. State Testing: The Fitnessgram, created and published by the Cooper Institute, is the officially sanctioned California Physical Fitness Test (PFT) for students in grades five, seven, and nine. It consists of the following components:
 1. A measurement of body composition (Body Mass Index) using a student's weight and height.
 2. A measurement of aerobic capacity and endurance using the Mile Run Test or the Pacer Test (a timed and structured lap-running program that can be conducted indoors or in smaller spaces than the mile run).
 3. A measurement of upper body strength using the push up test, modified pull up test, or flexed arm hang test.
 4. A measurement of abdominal strength and endurance using the curl up test.
 5. A measurement of trunk extensor strength and flexibility using the Trunk Lift Test; and
 6. A measurement of overall flexibility using the Back-Saver Sit and Reach Test or the Shoulder Stretch Test.
- b. Basic CACC PFT Criteria: The California Cadet Corps adopts the same criteria as the California Department of Education (CDE) for "passing" the Physical Fitness test with the modifications indicated in paragraph 1-4(e) below.
- c. Definition of the Healthy Fitness Zone: The California Department of Education says that a student must be in the Healthy Fitness Zone for five of the six areas on the test. The Healthy Fitness Zone (HFZ) is defined as the level of performance at which an individual is demonstrating fitness that offers a degree of protection against diseases resulting from physical inactivity. The HFZ is dependent on an individual's age and gender.
- d. Timelines for Administration: It is expected that all CACC units administer the complete CA PFT according to CDE guidelines during the specified testing time window annually. In addition, CACC units are expected to administer the CACC PFT once each semester to all Cadets, regardless of their grade level. Cadets being considered for promotion to all ranks above C/SSG are expected to have passed a CA PFT within six calendar months of the effective date for all such promotions. Individual school commandants are encouraged to require passing of a CA PFT prior to all cadet promotions. The expectation to administer a CA PFT at least once each semester is a requirement in addition to the CDE requirement.
- e. Modifications to the CDE PFT: The California Cadet Corps has modified the CA PFT to eliminate the Body Composition test as a required element and require the one mile run as the test of aerobic capacity, the push up as the test of upper body strength and endurance, and to require BOTH the back saver sit and reach and shoulder stretch tests (a Cadet must be in the HFZ in one of the two). When administering a CA PFT "for record" as required by the CA Department of Education, such modifications required by the CACC are not applicable.

f. Passing: “Passing” the California Cadet Corps PFT is defined as being in the Healthy Fitness Zone for ALL of the following:

1. Aerobic Capacity Test – The Mile Run; AND
2. Abdominal Strength and Endurance Test – The Curl Up; AND
3. Upper Body Strength and Endurance – The Push Up; AND
4. Trunk Extensor Strength and Flexibility Test – The Trunk Lift; AND
5. ONE of the following Overall Flexibility Tests: Sit and Reach (Left AND Right), or Shoulder Stretch (Left AND Right).

g. Preparation: A program of regular preparation for the CACC PFT is necessary and appropriate to give Cadets the maximum potential for success on the test. Chapter 2 to this regulation outlines such a program.

h. Medical Excuses: If Cadets have a medical excuse from the PFT, it should be on file with both the school office and in the Cadet’s 201 file, or profile noted in the Cadet’s file with documentation kept in a separate file accessible only by the Commandant. Such excuses must be updated annually and must be signed by a physician or physician’s assistant and provided on official medical office letterhead.

i. Grading: It is recommended that Cadets be assessed for academic grades in their CACC class partly on the basis of

1. Actively participating in the 10-15 minute regimen described in this regulation
2. Actively participating in the Fitness Log Goal Sheet activities (see Appendix B)
3. The quality of their reflection on the Fitness Log Goal Sheet questions at the conclusion of each two-month period
4. The completion of and written reflection on a weekly Wellness Journal, found in the CACC curriculum under Wellness, Strand W2, Lesson A2
5. Their participation in team sports and other vigorous physical activities demanded by the CACC Curriculum

1-5. AWARDS.

a. All Cadets who have scores within the Healthy Fitness Zone bands on each of the mile run, curl up test, and push up test, trunk lift, and ONE of the two flexibility tests (both sides of the shoulder stretch or both sides of the sit and reach) are eligible for the Physical Fitness Achievement Award.

b. Numerals shall be awarded in recognition of subsequent awards.

CHAPTER 2 – CONDITIONING FOR THE FITNESSGRAM / CADET PHYSICAL FITNESS TEST

2-1. RATIONALE.

It is possible to prepare for the PFT and improve PFT performance with a regimen of exercises that develop individual aerobic capacity, overall strength, endurance, and flexibility.

2-2. APPROACH.

Improving individual performance on the PFT is best achieved through:

- Regular physical fitness activities, preferably a minimum of two and preferably three days per week
- A planned program of instruction in basic concepts of fitness development and maintenance
- Explanations of each fitness area and its relationship to good health
- Specific physical activities that improve or maintain each of the components of health-related fitness
- Opportunities for Cadets to participate in vigorous physical activity and exercise
- Practice sessions which allow Cadets to learn about how each fitness area test is administered
- Use of the California Cadet Corps Fitness Log Goal Sheet, found in Appendix A. This goal sheet allows students to:
 - Establish baseline performance on each of the test areas
 - Set goals for improvement
 - Track performance over a two-month period
 - Reflect upon performance trends from baseline performance through a two-month period.

2-3. EXERCISE REGIMEN.

- a. It is recommended that CACC units require all Cadets to participate in at least two days per week of a guided fitness regimen.
 - b. It is recommended that CACC units require a day of vigorous physical activity such as team sports.
 - c. In addition, a second day should be devoted to:
 1. A 10-15 minute regimen of activities to help develop aerobic capacity, overall strength, endurance, and flexibility, as well as;
 2. The practicing of each part of the PFT through the use of the Fitness Log Goal Sheet found in the CACC Curriculum as item 3-A-4. Through the completion of this sheet, Cadets will have WEEKLY practice in specific preparation for the PFT.
 - d. The 10-15 minute regimen should consist of selections from the following:
 1. About 2 minutes of “Warm Up” activities such as the side bend, trunk twist, knee lift, calf stretch, arm circles, jumping jacks and brisk walking
 2. About 10 minutes of “Strength Development” activities such as crunches, curl ups, sit ups, the back arch, the wall sit, lunges, single leg lifts, arm curls, military press, modified pull ups, horizontal ladder activities, push ups, and climbing activities
 3. Aerobic activities such as jogging, cycling, swimming, brisk walking, rope jumping, soccer, and basketball (while these cannot be accomplished in a typical 10-15 minute session, they should be planned as part of the overall fitness program)
 4. Cool down activities such as the calf stretch, thigh stretch, sitting toe touch, knee hug, arm/shoulder stretch, and arm/side stretch.
 - e. See Appendix B for a handout picturing “Get Fit” exercises described above.

CHAPTER 3 – PHYSICAL FITNESS TESTING

3-1. GENERAL.

- a. All CACC units should administer the PFT once each semester or twice per school year.
- b. The PFT provides information that be used by Cadets to plan personal fitness programs; by commandants to design the curriculum of physical education program; and by parents and guardians to understand their students' fitness levels. This also allows the HQS, CACC to monitor changes in the physical fitness of Cadets statewide AND to compare the performance of Cadets to their non-Cadet counterparts statewide.
- c. While state statute only requires students in grades five, seven, and nine to take the PFT, the CACC requires all Cadets enrolled in the program to take the PFT twice per school year.
- d. Cadets younger than age 10 are not officially scored on the CACC PFT. Their performance is used to chart progress and for information purposes only.
- e. The test assesses three broad areas of fitness: (1) aerobic capacity, (2) body composition, and (3) muscle strength, endurance, and flexibility. The third area is subdivided in four areas: abdominal strength and endurance, trunk extensor strength and flexibility, upper body strength and endurance, and flexibility.
- f. The CACC PFT will consist of the following selected tests from the Fitnessgram. Only these tests are measured for the CACC PFT. Individual schools and school districts may require different tests for their state-mandated physical fitness testing; however, the following will be administered twice annually:
 - 1. Mile Run
 - 2. Push Ups
 - 3. Curl Ups
 - 4. Shoulder Stretch (Left and Right sides)
 - 5. Trunk Lift
 - 6. Sit and Reach (Left and Right sides)
- g. An optional scoresheet for the PFT is enclosed in Appendix C.

3-2. MILE RUN.

- a. The one-mile run is administered by instructing Cadets to run a mile as fast as possible. Walking is permitted for Cadets who cannot run the total distance. The time taken to complete the run is recorded in minutes and seconds.
- b. It is important that the distance run be exactly one mile and that the surface on which Cadets run is appropriate for running.
- c. The Healthy Fitness Zones for the One-Mile Run are as follows:

Age	Females (minutes and seconds)	Males (minutes and seconds)
10	12:30-9:30	11:30-9:00
11	12:00-9:00	11:00-8:30
12	12:00-9:00	10:30-8:00
13	11:30-9:00	10:00-7:30
14	11:00-8:30	9:30-7:00
15	10:30-8:00	9:00-7:00
16	10:00-8:00	8:30-7:00
17	10:00-8:00	8:30-7:00
18+	10:00-8:00	8:30-7:00

Table 1: Healthy Fitness Zone for the One-Mile Run

3-3. PUSH UPS.

- a. Push ups are executed at a pace of about one push up every three seconds. Ideally, the pace is called or played on a prerecorded tape or CD-ROM. Males and females follow the same protocol.
- b. The back and legs should be straight. The exercise begins in the “down” position. Each upward motion counts as one complete exercise.
- c. In the down position, the arm/elbows should be at a 90 degree angle.
- d. The Cadets are stopped when a second form correction is made or when they experience extreme discomfort or pain. The first form correction is counted among the completed push ups. The second form correction is NOT counted.

Figure 1a: Push Up “Up” Position



Figure 1b: Push Up “Down” Position



- e. The Healthy Fitness Zones for the Push Up test are as follows:

Age	Females # completed	Males # completed
10	7-15	7-20
11	7-15	8-20
12	7-15	10-20
13	7-15	12-25
14	7-15	14-30
15	7-15	16-35
16	7-15	18-35
17	7-15	18-35
18+	7-15	18-35

Table 2: Healthy Fitness Zones for Push Ups

3-4. CURL UPS.

- a. Curl ups are executed at a pace of about one curl up every three seconds. Ideally, the pace is called or played on a prerecorded tape or CD-ROM.
- b. Cadets lie on their backs with knees bent at a 140° angle, hands at their sides, palms facing down.
- c. Moving slowly, student curl up, sliding fingers across a measuring strip on the mat. A correct curl up requires the Cadet’s fingers to slide from one end of the strip to the opposite end of the strip.

d. The strip is 4.5 inches wide and 30-35 inches long. For Cadets younger than 10, a 3 inch wide strip should be used. The strip may be made of cardboard, or other appropriate material. The strip is placed at the edge of the Cadet's fingertips in the "down" position and should be secured in a way that prevent movement during the exercise. Cadets lift their upper bodies keeping their hands flat and complete a successful curl up when their fingertips surpass the opposite end of the strip.

e. The Cadets are stopped when a second form correction is made or when they experience extreme discomfort or pain. The first form correction is counted among the completed curl ups. The second form correction is NOT counted.

f. Males and females follow the same protocol. The exercise begins in the down position.

g. Students are stopped after four minutes or if they complete 75 successful curl ups, whichever comes first.

Figure 2a: Curl Up starting and "Down" position



Figure 2b: Curl Up "Up" position



h. The Healthy Fitness Zones for the Curl Up test are as follows:

Age	Females # completed	Males # completed
10	12-26	12-24
11	15-29	15-28
12	18-32	18-36
13	18-32	21-40
14	18-32	24-45
15	18-35	24-47
16	18-35	24-47
17	18-35	24-47
18+	18-35	24-47

Table 3: Healthy Fitness Zones for Curl Ups

3-5. SHOULDER STRETCH.

a. This test measures upper body flexibility. Cadets are instructed to touch the fingertips together behind the back with one hand reaching over the shoulder and the other under the elbow.

b. The test is repeated once with each "side" of the body. The left is measured when the left hand reaching over the shoulder and the right is measured with the right hand reaching over the shoulder.

c. Touching the fingertips of one hand to the other is considered being in the Healthy Fitness Zone.

In order to "pass" this test, BOTH sides must be in the Healthy Fitness Zone.

Figure 3: Shoulder Stretch



3-6. TRUNK LIFT.

- a. Lying face down on a mat, Cadets are asked to slowly lift the upper body off the floor, using the muscles of the back, to a maximum of 12 inches. Cadets need to hold the position for measurement.
- b. The measurement is taken as the distance from the floor to the bottom of the Cadet's chin. Measurement devices should NOT be placed immediately under the chin as a safety precaution.
- c. During the test, Cadets must keep their eyes focused on a spot on the floor directly in front of them. This spot can be marked with a quarter or similar device.
- d. No bouncing should be permitted.
- e. Cadets should not lift higher than 12 inches.
- f. The Healthy Fitness Zone for both genders and all ages is 9-12 inches.

Figure 4a: Trunk Lift Starting Position



Figure 4b: Trunk Lift Raised Position



3-7. SIT AND REACH.

- a. This test primarily measures hamstring flexibility.
- b. Cadets sit in front of a box with a ruler extended from the top edge of the box. The ruler is taped so that the number "1" is closest to the Cadet, the number "9" is exactly at the edge of the box, and the number 12 is furthest away from the Cadet.
- c. Starting in a sitting position with one leg extended touching the box (and the other leg bent), the student reaches forward with both hands along the scale (ruler) of the box. The Cadet reaches four times and holds the position on the fourth reach for at least one second. The distance the student reaches is recorded, and the same procedure is repeated with the opposite leg (foot) touching the box.
- d. To be in the HFZ, the student must reach the reach criteria using BOTH the right and left sides of the body.
- e. The knee of the extended leg should remain straight. The tester may place one hand on the Cadet's knee as a reminder to keep the knee straight. Do not push or use force to hold down the knee.
- f. Hips must remain square to the box. Do not allow the Cadet to turn the hip away from the box as s/he reaches.
- g. Reach performance should be limited to 12 inches.

Figure 5a: Sit and Reach Starting Position



Figure 5b: Sit and Reach Measuring Position



h. The Healthy Fitness Zones for the Sit and Reach are as follows:

Age	Female Inches	Male Inches
10	9	8
11-14	10	8
15+	12	8

Table 4: Healthy Fitness Zones for the Sit and Reach

CHAPTER 4 – ARMY-STYLE PHYSICAL TRAINING

4-1. GENERAL

It is appropriate, but not mandatory, to conduct Army-style physical training (PT), or a combination of Army formations and commands with a variety of exercises. It's important to note that we're not training soldiers in the California Cadet Corps. We want to introduce Cadets to Army Physical Training, but some Army PT is designed for soldiers whose physical bodies are more mature than those of teenagers. Not all Army PT is appropriate for Cadets. But it is appropriate at some level, as long as you stay within recommended parameters when exercising, and pay attention to other fitness doctrine about what teenagers can and should be doing. Certainly, we can do some PT using Army methods, which accomplishes both fitness training and the discipline, teamwork, and leadership building goals of the Cadet program.

References: You may refer to the following references in developing a fitness program using Army-style PT:

- CACC Curriculum on Wellness, Physical Fitness Strand, Section A1: Army Physical Training
- Field Manual (FM) 7-22, Army Physical Readiness Training
- FM 3-21.5, Drill & Ceremonies
- www.ArmyPT.com
- www.physicallytrained.com

4-2. Commands & Mirror Effect

PT performance reflects the quality of its commands. Indifferent commands produce indifferent performance. When a command is given distinctly, concisely, with energy, and with proper regard to rhythm, cadet performance will reflect it. See TC 3-21.5, Drill and Ceremonies, for detailed information of command voice, posture, and presence.

When the PT leader addresses the formation and is commanding movement or announcing the name of an exercise, he does so from the position of attention. Exceptions are exercises that change position without returning to the position of attention.

When exercises are performed, Cadets assume the proper starting position of each exercise on the command “Starting position, MOVE.” When conducting exercises, Cadets are commanded to return to the position of attention from the terminating position of the exercise before they are commanded to assume the starting position for the next exercise. PT leaders use the command “Position of Attention, MOVE”, to bring Cadets to the position of attention from an exercise terminating position.

For example, this is how the PT leader would conduct exercise 4, thigh stretch in the Recovery Drill:

- From the position of attention, the PT leader commands, “**THE THIGH STRETCH.**”
- Cadets respond, “**THE THIGH STRETCH.**”
- From the position of attention, the PT leader commands, “**Starting Position, MOVE.**”
- The PT leader and Cadets assume the starting position for the thigh stretch.
- From the starting position, the PT leader commands, “**Ready, STRETCH.**”
- To change position, the PT leader first commands, “**Starting Position, MOVE.**”
- From the starting position, the PT leader commands, “**Change Position, Ready, STRETCH.**”
- Upon termination of the exercise, the PT leader commands, “**Starting Position, MOVE.**”
- The PT leader assumes the position of attention and commands, “**Position of Attention, MOVE.**”

When leading an exercise in front of the formation, the PT leader begins the movements in count 1 to the right. He continues to mirror the Cadet’s movements while facing them throughout the exercise.

4-3. Formations

a. The Extended Rectangular Formation is the most common formation used for PT. The PT leader will position a platoon-size unit in a line formation so that the unit is centered and five paces away from the PT platform or PT leader after they have assumed the rectangular formation. A company-size unit may consolidate into one large “platoon” or mass in order to do PT. If a company mass is used, it is treated like a large platoon with the Extended Rectangular Formation. The PT leader gives the following commands:

- **“Extend to the left, MARCH.”** Cadets in the right flank file stand fast with their left arm extended sideward with palm down, fingers and thumbs extended and joined. All other Cadets turn to the left and double-time forward. After taking the sufficient number of steps, all Cadets face the front and extend both arms sideward with palms down, fingers and thumbs extended and joined. The distance between fingertips is about 12 inches and dress is to the right.
- **“Arms downward, MOVE.”** The Cadets lower their arms smartly to their sides. Cadets in the right flank file lower their left arms to their sides.
- **“Left, FACE.”** Cadets execute the left face.
- **“Extend to the left, MARCH.”** Cadets in the right flank file stand fast with their left arms extended sideward with palm down, fingers and thumbs extended and joined. All other Cadets turn to the left and double-time forward. After taking the sufficient number of steps, all Cadets face the front and extend both arms sideward with palms down, fingers and thumbs extended and joined. The distance between fingertips is about 12 inches and dress is to the right.
- **“Arms downward, MOVE.”** Cadets lower their arms smartly to their sides. Cadets in the right flank file lower their left arms to their sides.
- **“Right, FACE.”** Cadets execute the right face.
- **“From front to rear, COUNT OFF.”** The front Cadet in each column turns his head to the right rear, and then calls off, “ONE,” and faces the front. Successive Cadets in each column call off in turn “TWO,” “THREE,” “FOUR,” and so on. The last Cadet in each column will not turn his head and eyes to the right while sounding off.
- **“Even numbers to the left, UNCOVER.”** Even-numbered Cadets side step to the left squarely in the center of the interval, bringing their feet together.

b. To reassemble the formation, the PT leader commands:

- **“Assemble to the Right, MARCH.”** All Cadets double-time to their original positions in the formation

c. Another formations that is useful for PT is the Circular Formation, per TC 3-21.5, para 2-4d.

- The PT Instructor positions himself in front of the lead Cadet in the lead squad and commands **Circle Formation, FOLLOW ME.** The instructor double-times in a circle large enough for the formation and moves to the center of the circle.
- The members of the lead squad follow at an arm’s length plus 6 inches (approximately 40 inches total). The squad leaders of the following squads begin double-timing at the correct distance from the last Cadet in the preceding squad without command.
- After the entire formation is in a circle, the instructor comes to the position of attention and commands **Quick time, MARCH.** The Cadets begin marching normally. The instructor then gives directives to individual Cadets and corrects the distance between them until each member is at approximately double arm interval.
- The instructor then commands the formation to **Halt** using the appropriate preparatory command.
- The instructor then commands **Left, FACE.** All personnel face toward the instructor. The formation is now ready for instruction.
- To return the formation to its original configuration, the instructor commands the formation to attention and commands **FALL OUT**, and then **FALL IN.** On the command **FALL IN**, all Cadets return to their original position in formation.

4-4. Positions

a. When a set of conditioning exercises is employed, Cadets assume the proper starting position of each exercise on the command “**Starting Position, MOVE.**” When conducting exercises, Cadets are commanded to return to the position of attention from the terminating position of the exercise, before commanded to assume the starting position for the next exercise.

b. SQUAT POSITION

To assume the squat position from the position of attention, lower the body by bending the knees and place the hands with palms down and fingers spread, shoulder width in front of the body, and in between the bent legs. Raise the heels, supporting the body weight on the balls of the feet and hands. Direct the head and the eyes to a point about three to four feet in front of the body (Figure 6).

Figure 6. Squat Position



c. FRONT LEANING REST POSITION

The Cadet assumes the front leaning rest position by performing two movements. First, the Cadet moves from the position of attention to the squat position, then thrusts the feet backward to the front leaning rest position. If he has trouble with the squat thrust, he can step back with his left leg—then with his right leg—to get into the front leaning rest position. In the front leaning rest position, maintain straight body alignment from his head to his heels. He supports his body weight on his hands (shoulder width) and on the balls of his feet. He keeps his feet and legs together (Figure 7).

Figure 7. Front Leaning Rest Position



d. SIX-POINT STANCE

Assume the six-point stance by dropping to the knees from the front leaning rest position. Maintain a straight line from the head to the knees (Figure 8).

Figure 8. Six-Point Stance



e. STRADDLE STANCE

Assume the straddle stance position by standing with the feet straight ahead and aligned with the shoulders (Figure 9).

Figure 9. Straddle Stance



Figure 10. Forward Leaning Stance



f. FORWARD LEANING STANCE

Assume the forward leaning stance by bending the trunk forward 45 degrees, knees bent 45 degrees, with the heels flat on the ground, and the feet aligned with the shoulders. Keep the back straight, maintaining a straight line from the head to the hips (Figure 10).

g. PRONE POSITION

Assume the prone position by performing three movements: 1) From the position of attention, move to the squat position, 2) thrust the feet backward to the front leaning rest position, and then 3) lower the body slowly to the ground. Keep the elbows close to the body and pointed directly to the rear (Figure 11).

Figure 11. Prone Position



h. SUPINE POSITION

1. To assume the supine position without using the hands, from the standing position, place one foot behind the other and slowly lower the body until the rear knee touches the ground. Sit back onto the buttocks and then lay on the back with feet and legs together (Figure 12). When returning to the standing position, sit up and rock forward on one knee. From this position, step up with the other leg and stand without using the hands for assistance (Figure 12).

Figure 7-12. Supine Position



2. If the Cadet has difficulty assuming this position, he can place his hands on the ground as he slowly lowers his body to the seated position (Figure 13). If he cannot attain the standing position without using his hands, he can

place them on the ground to either side of his body and push up while standing from the seated position. To return to a standing position from the supine position, he performs the actions in reverse order (Figure 12).

Figure 13. Hands Down Assist to Supine Position



4-5. Cadence Speed, Exercise Name, & Counts

a. Cadence speed is described as SLOW or MODERATE. The speed of each cadence is listed below:

- SLOW—50 counts per minute.
- MODERATE—80 counts per minute.

b. Exercise Name. Once Cadets have learned the names of the exercises, the PT leader merely needs to say the exercise name, command the Cadets to assume the starting position and start them exercising to cadence. For example, this is how the PT leader begins exercise 1 of preparation, bend, and reach to cadence:

- The PT leader states, “**the Bend and Reach.**”
- The Cadets respond, “**the Bend and Reach.**”
- The PT leader commands, “**Starting Position, MOVE**” (Cadets assume the starting position).
- The PT leader commands, “**In Cadence** (Cadets respond, “**In Cadence**”), **EXERCISE.**”
- The command, “**EXERCISE**” initiates movement to the position of count 1.

Counting cadence ensures that exercises are performed at the appropriate speed. The cadence count indicates termination of movement to each position. The cumulative count is a method of indicating the number of repetitions of an exercise on the fourth count of a 4-count exercise. The use of the cumulative count is required for the following reasons:

- It provides the PT leader with an excellent method of counting the number of repetitions performed.
- It serves as motivation. Cadets like to know the number of repetitions they are expected to perform.
- It prescribes an exact amount of exercise for any group.

c. Counts. This paragraph describes the conduct of cadence counts:

Four-Count Exercise

- The PT leader counts, “**One, two, three.**”
- The Cadets respond, “**One.**”
- The PT leader counts, “**One, two, three.**”
- The Cadets respond, “**Two.**”
- The PT leader counts, “**One, two, three.**”
- The Cadets respond, “**Three,**” and so forth.

Eight-Count Exercise

- The PT leader counts, “**One, two, three, four, five, six, seven.**”
- The Cadets respond, “**One.**”
- The PT leader counts, “**One, two, three, four, five, six, seven.**”
- The Cadets respond, “**Two.**”
- The PT leader counts, “**One, two, three, four, five, six, seven.**”
- The Cadets respond, “**Three,**” and so forth.

Termination. To terminate an exercise, the PT leader will raise the inflection of his voice while counting out the cadence of the last repetition. The Cadets and PT leader respond with “**HALT**” upon returning to the starting position.

Four-Count Exercise

- The PT leader counts, “**One, two, three.**”
- The Cadets respond, “**Nine.**”
- The PT leader counts, “**One, two, three**” (with voice inflection).
- The Cadets and PT leader respond, “**HALT.**”
- The PT leader commands “**Position of attention, MOVE.**”
- The Cadets assume the position of attention.

Eight-Count Exercise

- The PT leader counts, “**One, two, three, four, five, six, seven.**”
- The Cadets respond, “**Four.**”
- The PT leader counts, “**One, two, three, four, five, six, seven**” (with voice inflection on counts five, six, and seven).
- The Cadets and PT leader respond, “**HALT.**”
- The PT leader commands, “**Position of attention, MOVE.**”
- The Cadets assume the position of attention.

4-6. Preparation Drill (PD)

a. The PD consists of ten exercises performed for 5-10 repetitions at a slow cadence, with the exception of the high jumper and push-up (which are performed at a moderate cadence). When conducted to standard, preparation will last about 15 minutes. Since PT sessions are generally limited to one hour or less (or a class period), preparation must be brief, yet thorough. The objectives of preparation are to:

- Increase body temperature and heart rate.
- Increase pliability of joints and muscles.
- Increase responsiveness of nerves and muscles.

b. Any dry, level area of adequate size is satisfactory for conducting the PD. Cadets should wear a PT uniform or loose fitting clothing that allows sweat to dissipate.

c. The extended rectangular formation is prescribed for the conduct of the PD.

d. The PT leader must be familiar with the method of teaching these exercises, the commands, the formations, and the use of AIs as described in Lesson A2, Execution of Training. The callisthenic exercises that comprise the PD are always given in cadence. Cadets begin and terminate each exercise at the starting position, then move to the position of attention. The goal is to complete the entire drill with only enough pauses between exercises for the PT leader to indicate the next one by name. This continuous method of conducting the PD intensifies the workload and conserves time. Cadets should memorize the exercises by name and movement.

e. Preparation loses much of its value unless performed exactly as prescribed. During preparation, the focus is always on quality of movement, not quantity of repetitions or speed of movement. A callisthenic cadence that is too fast will not allow Cadets to achieve a full range of movement and may not adequately prepare them for the activities that follow. Assistant instructors will help to maintain the ranks at the appropriate pace and offer feedback on form.

f. Preparation is always performed in all phases of PT. When Cadets are in fairly poor shape, the PD consists of 5 repetitions of 10 exercises performed at a slow cadence, with the exception of the high jumper and the push-up, which are performed at a moderate cadence. Once Cadets are in better physical condition, they progress from performing 5 repetitions to 10 repetitions of each exercise in the PD. Table 5 lists the 10 callisthenic exercises that comprise the PD. These 10 exercises are always performed in the order and at the cadence shown.

1. Bend and Reach	5-10 repetitions, slow
2. Rear lunge	5-10 repetitions, slow
3. High jumper	5-10 repetitions, moderate
4. Rower	5-10 repetitions, slow
5. Squat bender	5-10 repetitions, slow
6. Windmill	5-10 repetitions, slow
7. Forward lunge	5-10 repetitions, slow
8. Prone row	5-10 repetitions, slow
9. Bent-leg body twist	5-10 repetitions, slow
10. Push-up	5-10 repetitions, moderate

Table 5: Preparation Drill Exercises, Repetitions, and Cadence

g. The PD exercises are executed as follows:

1. PREPARATION DRILL EXERCISE 1: BEND AND REACH

Purpose: This exercise develops the ability to squat and reach through the legs. It also serves to prepare the spine and extremities for more vigorous movements, moving the hips and spine through full flexion (Figure 14).

Starting Position: Straddle stance with arms overhead, palms facing inward, fingers and thumbs extended and joined.

Cadence: SLOW

Count:

1. Squat with the heels flat as the spine rounds forward to allow the straight arms to reach as far as possible between the legs.
2. Return to the starting position.
3. Repeat count one.
4. Return to the starting position.

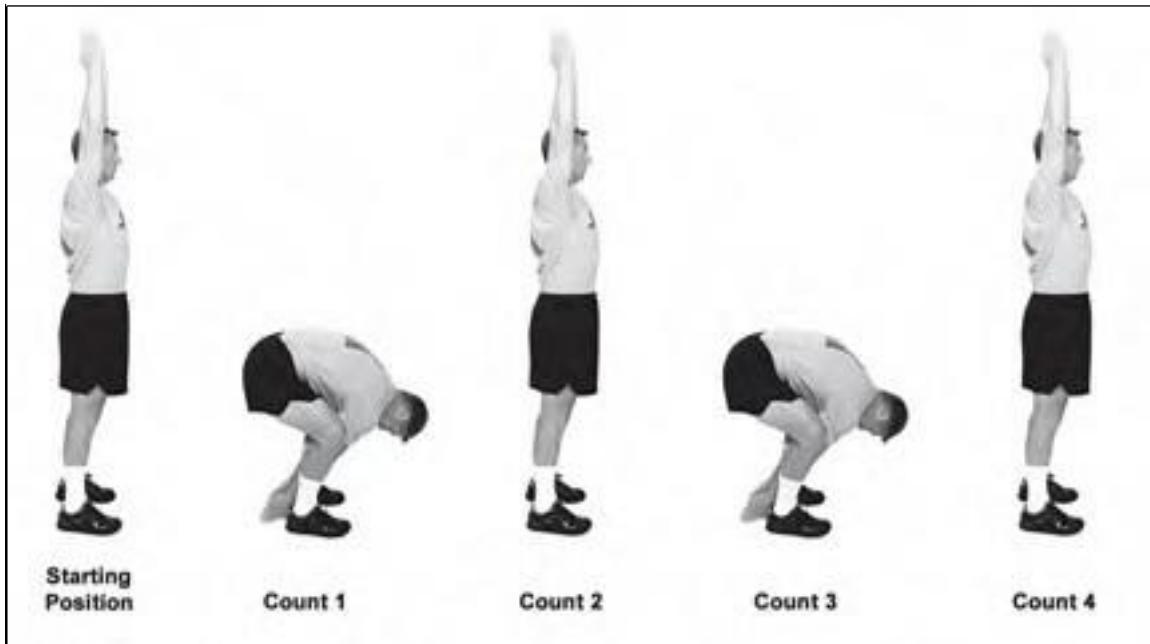


Figure 14. Bend and Reach

Check Points:

- From the starting position, ensure that Cadets have their hips set, their abdominals tight, and their arms fully extended overhead.
- The neck flexes to allow the gaze to the rear. This brings the head in line with the bend of the trunk.
- The heels and feet remain flat on the ground.
- On counts 2 and 4, do not go past the starting position.

Precautions: This exercise is always performed at a slow cadence. To protect the back, move into the count one position in a slow, controlled manner. Do not bounce into or out of this position in a ballistic manner, as this may place an excessive load on the back.

2. PREPARATION DRILL EXERCISE 2: REAR LUNGE

Purpose: This exercise promotes balance, opens up the hip and trunk on the side of the lunge, and develops leg strength (Figure 15).

Starting Position: Straddle stance with hands on hips.

Cadence: SLOW

Count:

1. Take an exaggerated step backward with the left leg, touching down with the ball of the foot.
2. Return to the starting position.
3. Repeat count one with the right leg.
4. Return to the starting position.

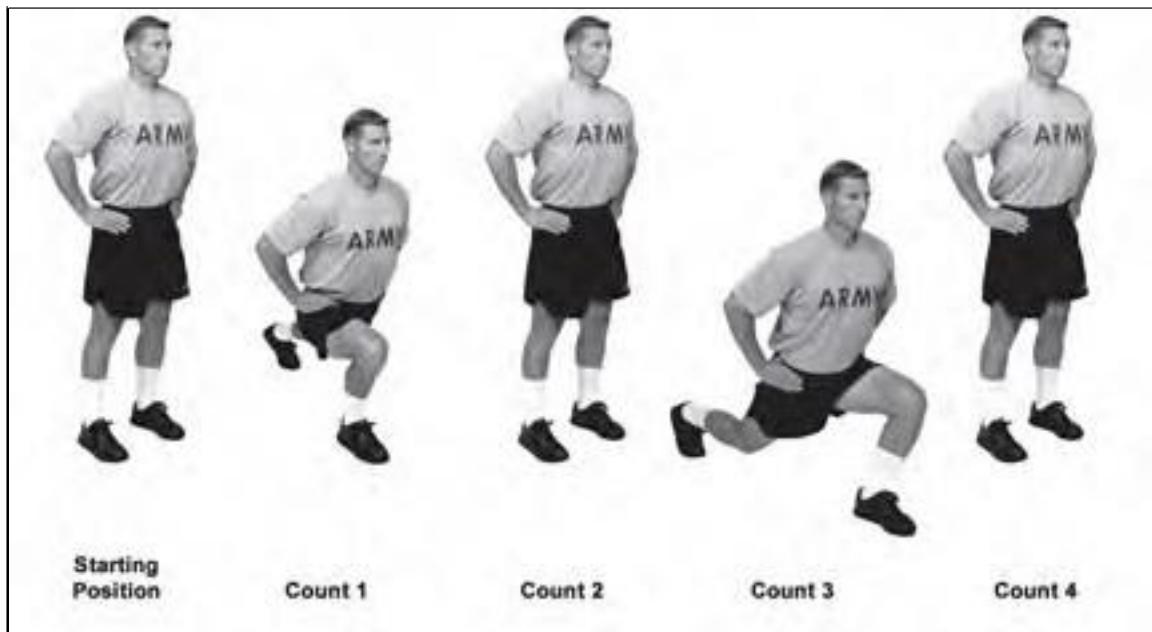


Figure 15. Rear Lunge

Check Points:

- Maintain straightness of the back by keeping the abdominal muscles tight throughout the motion.
- After the foot touches down, allow the body to continue to lower. This promotes flexibility of the hip and trunk.
- On counts 1 and 3, step straight to the rear, keeping the feet directed forward. When viewed from the front, the feet maintain their distance apart both at the starting position and at the end of counts 1 and 3.
- Keep the rear leg as straight as possible but not locked and the rear heel off the ground.

Precautions: This exercise is always performed at a slow cadence. On counts 1 and 3, move into position in a slow, controlled manner. If the cadence is too fast, it will be difficult to go through a full range of motion.

3. PREPARATION DRILL EXERCISE 3: HIGH JUMPER

Purpose: This exercise reinforces correct jumping and landing, stimulates balance and coordination, and develops explosive strength (Figure 16).

Starting Position: Forward leaning stance, palms facing inward, fingers and thumbs extended and joined.

Cadence: MODERATE

Count:

1. Swing arms forward and jump a few inches.
2. Swing arms backward and jump a few inches.
3. Swing arms forward and vigorously overhead while jumping forcefully.
4. Repeat count 2. On the last repetition, return to the starting position.

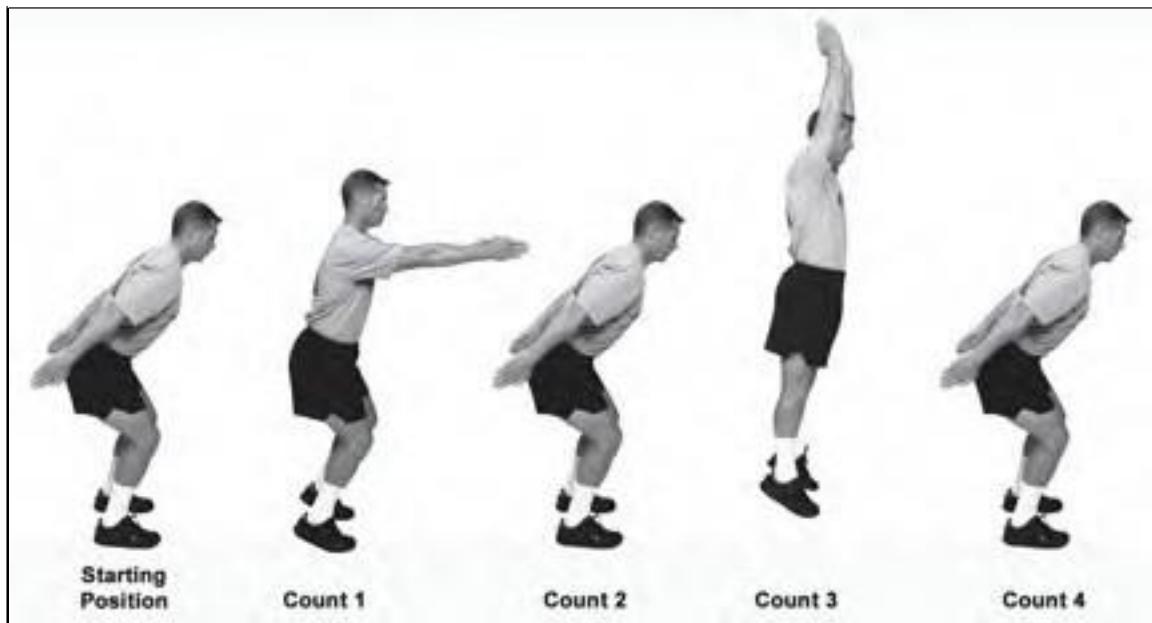


Figure 16. High Jumper

Check Points:

- At the starting position, the shoulders, the knees, and the balls of the feet should form a straight vertical line.
- On count 1, the arms are parallel to the ground.
- On count 3, the arms should be extended fully overhead. The trunk and legs should also be aligned.
- The Cadet is jumping on each count. On counts 1, 2, and 4, the jumps are only 4-6 inches off the ground. On count 3, the Cadet jumps higher (6-10 inches) while maintaining the posture pictured in Figure 8-3.
- On each landing, the feet should be directed forward and maintained at shoulder distance apart. The landing should be “soft” and proceed from the balls of the feet to the heels. The vertical line from the shoulders through the knees to the balls of the feet should be demonstrated on each landing.

4. PREPARATION DRILL EXERCISE 4: ROWER

Purpose: This exercise improves the ability to move in and out of the supine position to a seated posture. It coordinates the action of the trunk and extremities while challenging the abdominal muscles (Figure 17).

Starting Position: Supine position, arms overhead, feet together and pointing upward. The chin is tucked and the head is 1-2 inches above the ground. Arms are shoulder-width, palms facing inward with fingers and thumbs extended and joined.

Cadence: SLOW

Count:

1. Sit up while swinging arms forward and bending at the hip and knees. At the end of the motion, the arms will be parallel to the ground with palms facing inward.
2. Return to the starting position.
3. Repeat count 1.
4. Return to the starting position.

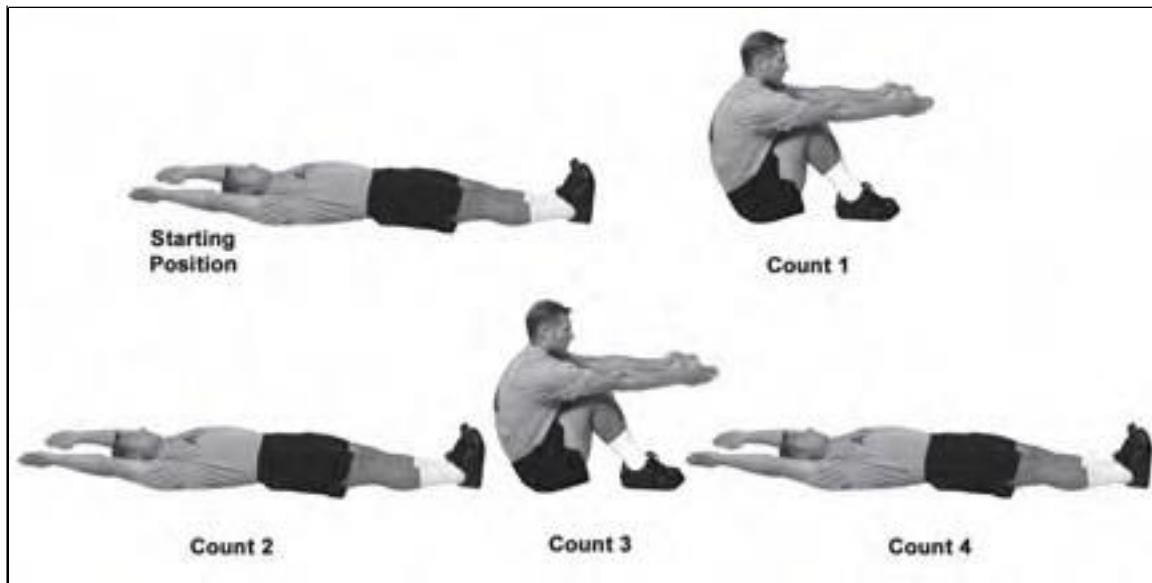


Figure 17. Rower

Check Points:

- At the starting position, the low back must not be arched excessively off the ground. To prevent this, tighten the abdominal muscles to tilt the pelvis and low back toward the ground.
- At the end of counts 1 and 3, the feet are flat and pulled near the buttocks. The legs stay together throughout the exercise and the arms are parallel to the ground.

Precautions: This exercise is always performed at a slow cadence. Do not arch the back to assume counts 1 and 3.

5. PREPARATION DRILL EXERCISE 5: SQUAT BENDER

Purpose: This exercise develops strength, endurance, and flexibility of the lower back and lower extremities (Figure 18).

Starting Position: Straddle stance with hands on hips.

Cadence: SLOW

Count:

1. Squat while leaning slightly forward at the waist with the head up and extend the arms to the front, with arms parallel to the ground and palms facing inward.
2. Return to the starting position.
3. Bend forward and reach toward the ground with both arms extended and palms inward.
4. Return to the starting position.

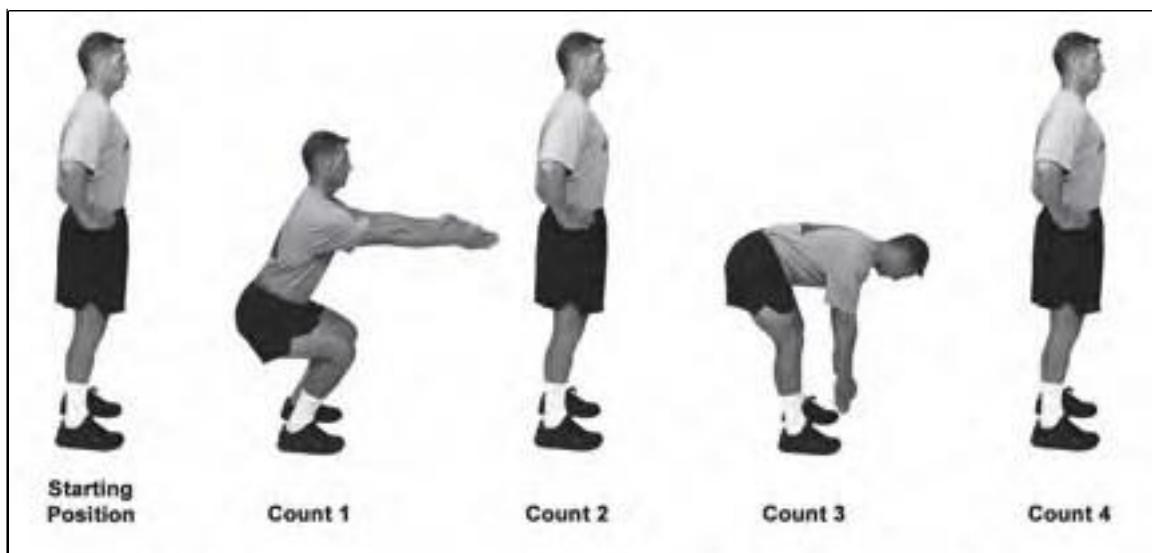


Figure 18. Squat Bender

Check Points:

- At the end of count 1, the shoulders, knees, and the balls of the feet should be aligned. The heels remain on the ground and the back is straight.
- On count 3, bend forward, keeping the head aligned with the spine and the knees slightly bent.
- Attempt to keep the back flat and parallel to the ground.

Precaution: This exercise is always performed at a slow cadence. Allowing the knees to go beyond the toes on count 1 increases stress to the knees.

6. PREPARATION DRILL EXERCISE 6: WINDMILL

Purpose: This exercise develops the ability to safely bend and rotate the trunk. It conditions the muscles of the trunk, legs, and shoulders (Figure 19).

Starting Position: Straddle stance with arms sideward, palms facing down, fingers and thumbs extended and joined.

Cadence: SLOW

Count:

1. Bend the hips and knees while rotating to the left. Reach down and touch the outside of the left foot with the right hand and look toward the rear. The left arm is pulled rearward to maintain a straight line with the right arm.
2. Return to the starting position.
3. Repeat count 1 to the right.
4. Return to the starting position.

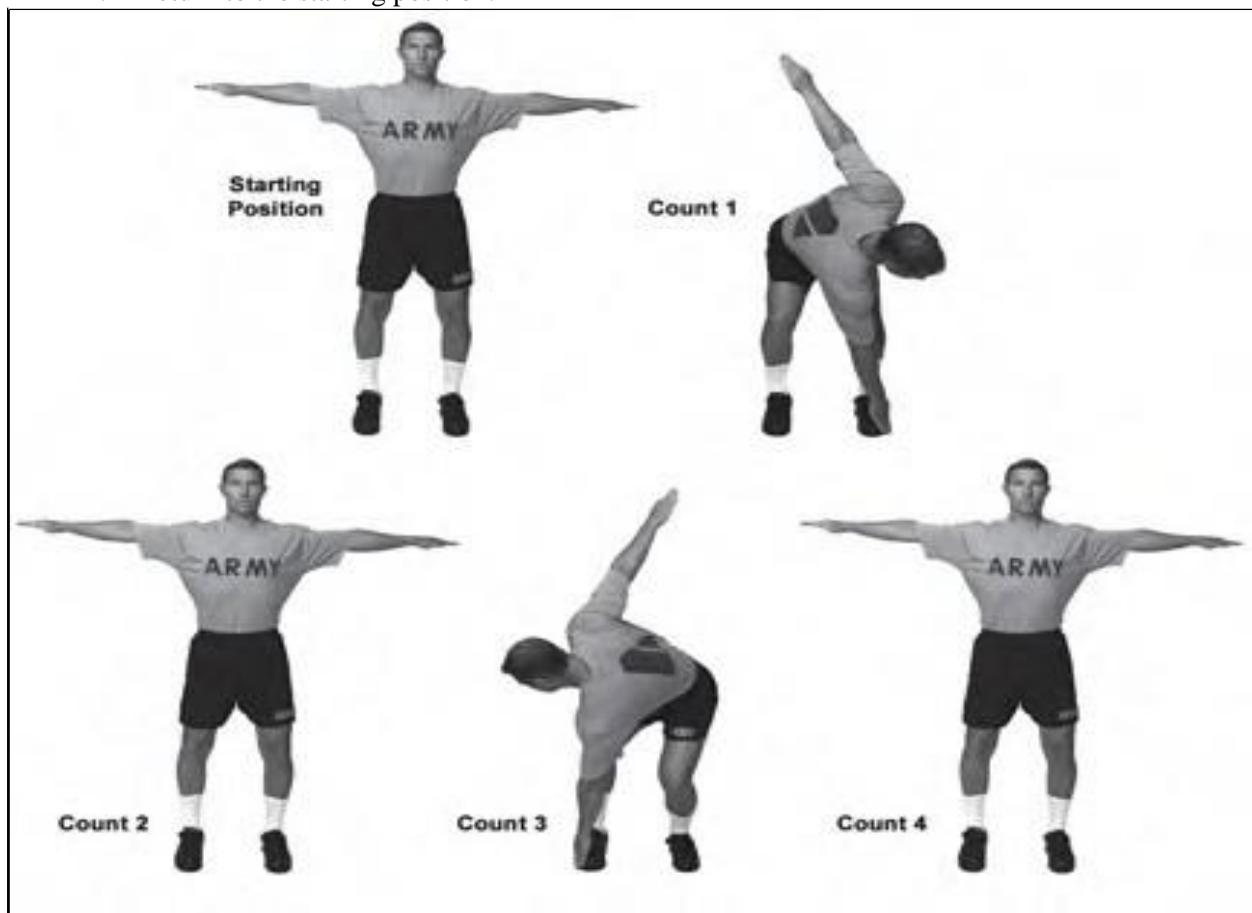


Figure 19. Windmill

Check Points:

- From the starting position, feet are straight ahead, arms parallel to the ground, hips set, and abdominals tight.
- On counts 1 and 3, ensure that both knees bend during the rotation. Head and eyes are directed to the rear on counts 1 and 3.

Precaution: This exercise is always performed at a slow cadence.

7. PREPARATION DRILL EXERCISE 7: FORWARD LUNGE

Purpose: This exercise promotes balance and develops leg strength (Figure 20).

Starting Position: Straddle stance with hands on hips.

Cadence: SLOW

Count:

1. Take a step forward with the left leg (the left heel should be 3 to 6 inches forward of the right foot). Lunge forward, lowering the body and allow the left knee to bend until the thigh is parallel to the ground. Lean slightly forward, keeping the back straight.
2. Return to the starting position.
3. Repeat count one with the right leg.
4. Return to the starting position.

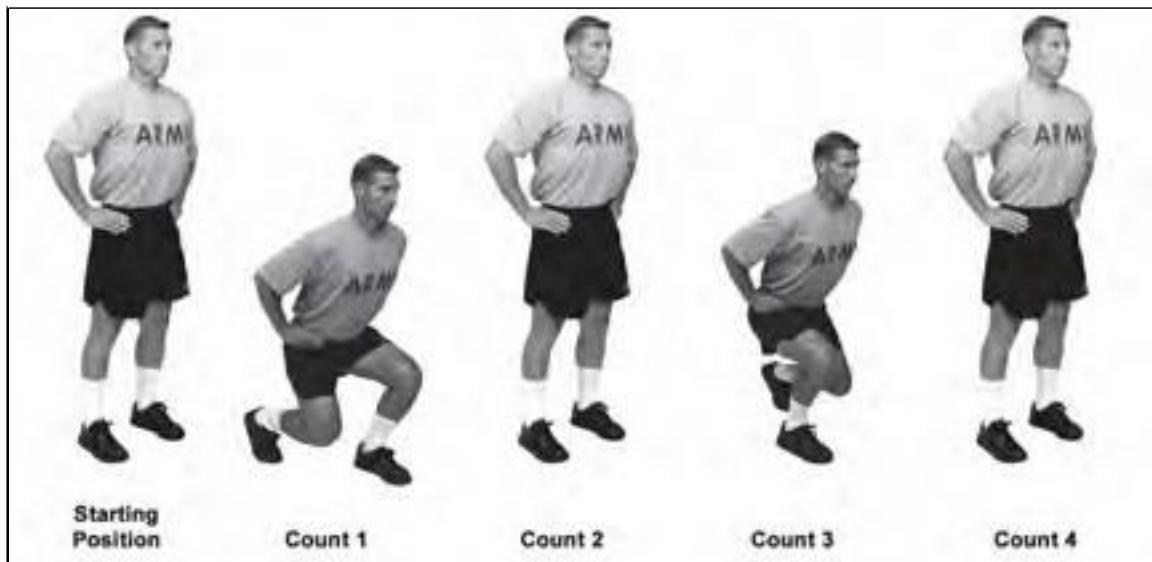


Figure 20. Forward Lunge

Check Points:

- Keep the abdominal muscles tight throughout the motion.
- On counts 1 and 3, step straight forward, keeping the feet directed forward. When viewed from the front, the feet maintain their distance apart both at the starting position and at the end of counts 1 and 3.
- On counts 1 and 3, the rear knee bends, but does not touch the ground. The heel of the rear foot should be off the ground.

Precautions: This exercise is always performed at a slow cadence. On counts 1 and 3, move into position in a controlled manner. Spring off of the forward leg to return to the starting position. This avoids jerking the trunk to create momentum.

8. PREPARATION DRILL EXERCISE 8: PRONE ROW

Purpose: This exercise develops strength of the back and shoulders (Figure 21).

Starting Position: Prone position with the arms overhead, palms down, fingers and thumbs extended and joined, 1 to 2 inches off the ground and toes pointed to the rear.

Cadence: SLOW

Count:

1. Raise the head and chest slightly while lifting the arms and pulling them rearward. Hands make fists as they move toward the shoulders.
2. Return to the starting position.
3. Repeat count 1.
4. Return to the starting position.

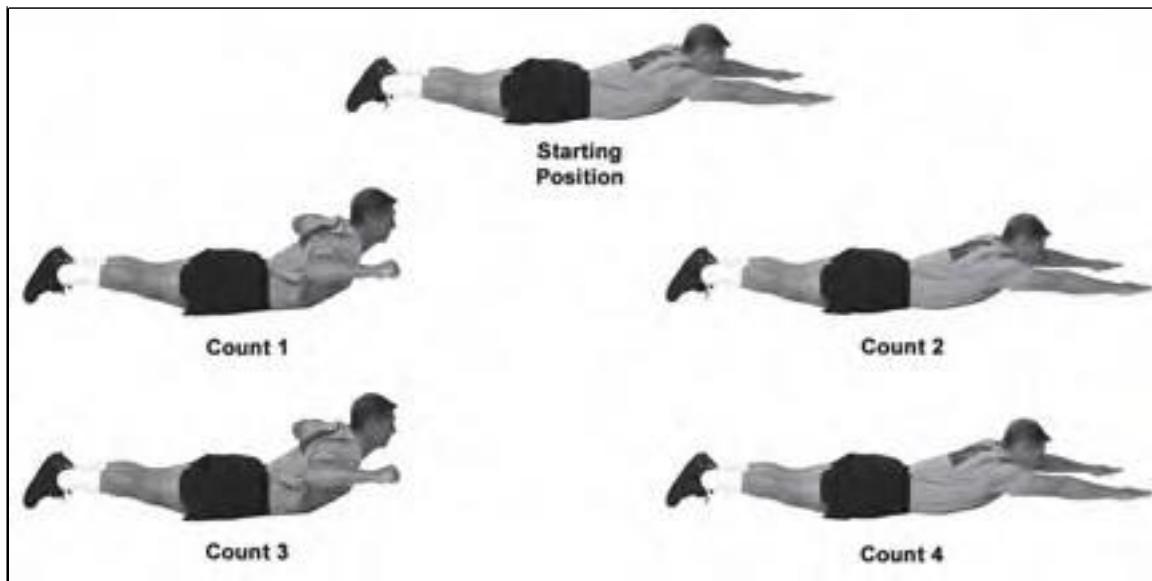


Figure 21. Prone Row

Check Points:

- At the starting position, the abdominal muscles are tight and the head is aligned with the spine.
- On counts 1 and 3, the forearms are parallel to the ground and slightly higher than the trunk.
- On counts 1 and 3, the head is raised to look forward but not skyward.
- Throughout the exercise, the legs and toes remain in contact with the ground.

Precautions: This exercise is always performed at a slow cadence. Prevent overarching of the back by maintaining contractions of the abdominal and buttocks muscles throughout the exercise.

9. PREPARATION DRILL EXERCISE 9: BENT-LEG BODY TWIST

Purpose: This exercise strengthens trunk muscles and promotes control of trunk rotation (Figure 22).

Starting Position: Supine position with the hips and knees bent to 90-degrees, arms sideward and palms down. The knees and feet are together.

Cadence: SLOW

Count:

1. Rotate the legs to the left while keeping the upper back and arms in place.
2. Return to the starting position.
3. Repeat count 1 to the right.
4. Return to the starting position.

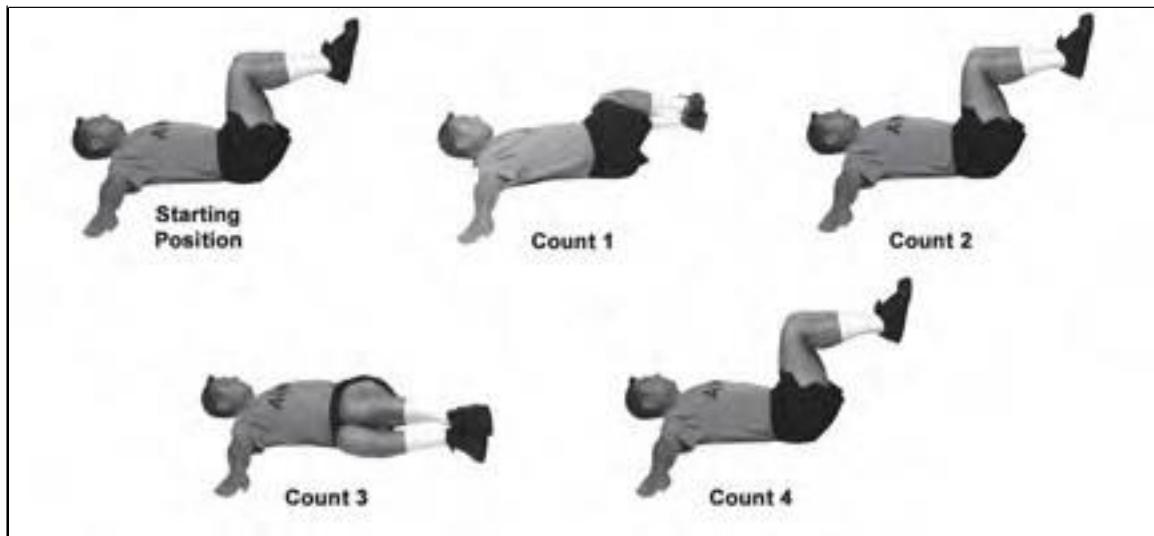


Figure 22. Bent-leg Body Twist

Check Points:

- Tighten the abdominal muscles in the starting position and maintain this contraction throughout the exercise.
- The head should be off the ground with the chin slightly tucked.
- Ensure that the hips and knees maintain 90-degree angles.
- Keep the feet and knees together throughout the exercise.
- Attempt to rotate the legs to about 8 to 10 inches off the ground. The opposite shoulder must remain in contact with the ground.

Precautions: This exercise is always performed at a slow cadence. Do not rotate the legs to a point beyond which the opposite arm and shoulder can no longer maintain contact with the ground.

10. PREPARATION DRILL EXERCISE 10: PUSH-UP

Purpose: This exercise strengthens the muscles of the chest, shoulders, arms, and trunk (Figure 23).

Starting Position: Front leaning rest position.

Cadence: MODERATE

Count:

1. Bend the elbows, lowering the body until the upper arms are parallel with the ground.
2. Return to the starting position.
3. Repeat count 1.
4. Return to the starting position.

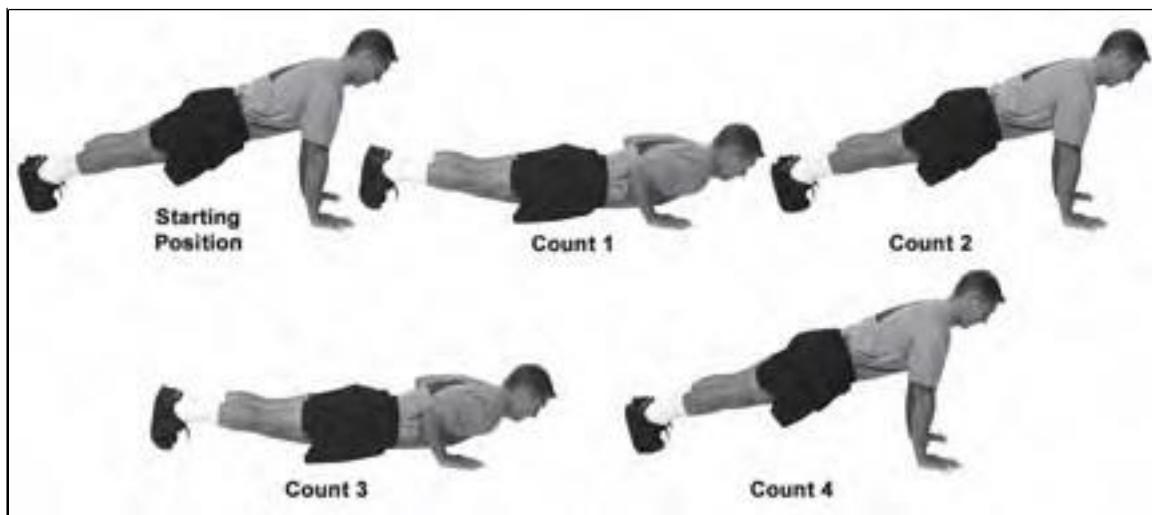


Figure 23. Push-Up

Check Points:

- The hands are directly below the shoulders with fingers spread (middle fingers point straight ahead).
- On counts 1 and 3, the upper arms stay close to the trunk, elbows pointing rearward.
- On counts 2 and 4, the elbows straighten but do not lock.
- To prevent the trunk from sagging, tighten the abdominal muscles while in the starting position and maintain this contraction throughout the exercise.

EXERCISE 10A: PUSH-UP USING THE SIX-POINT STANCE

Purpose: Cadets should assume the six-point stance on their knees, when unable to perform repetitions correctly to cadence (Figure 24).



Figure 24. Push-up using the six-point stance

4-7. Recovery Drill (RD)

a. Table 6 lists the 5 two-position exercises that comprise the RD. These 5 exercises are always performed in the order listed and held for about 20 seconds. The recovery exercises are not given in cadence. Cadets move in and out of the starting position and exercise positions on the PT leader's command. The seconds are not counted out loud.

1. OVERHEAD ARM PULL	HOLD 20 SECONDS
2. REAR LUNGE	HOLD 20 SECONDS
3. EXTEND AND FLEX	HOLD 20 SECONDS
4. THIGH STRETCH	HOLD 20 SECONDS
5. SINGLE-LEG OVER	HOLD 20 SECONDS

Table 6: Recovery Drill

b. The RD exercises are executed as follows:

1. RECOVERY DRILL EXERCISE 1: OVERHEAD ARM PULL

Purpose: This exercise develops flexibility of the arms, shoulders, and trunk muscles (Figure 25).

Starting Position: Straddle stance with hands on hips.

Position 1: On the command, “**Ready, STRETCH,**” raise the left arm overhead and place the left hand behind the head. Grasp above the left elbow with the right hand and pull to the right, leaning the body to the right. Hold this position for 20 seconds.

Starting Position: On the command “**Starting Position, MOVE,**” assume the starting position.

Position 2: On the command “**Change Position, Ready, STRETCH,**” raise the right arm overhead and place the right hand behind the head. Grasp above the right elbow with the left hand and pull to the left, leaning the body to the left. Hold this position for 20-30 seconds.

Starting Position: On the command “**Starting Position, MOVE,**” return to the starting position.

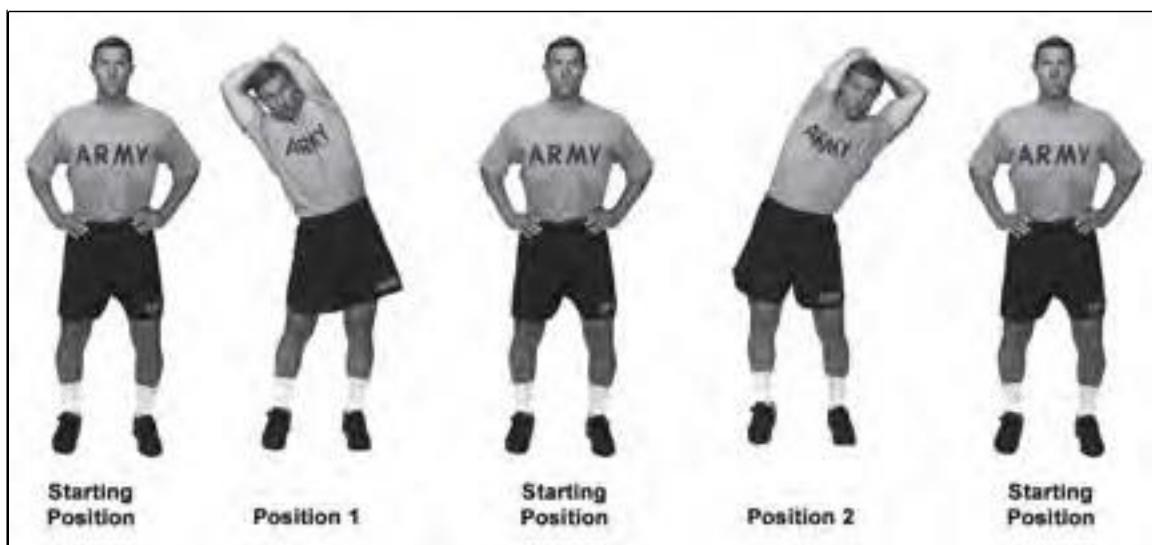


Figure 25. Overhead Arm Pull

Check Points:

- Throughout the exercise, keep the hips set and the abdominals tight.
- In positions 1 and 2, lean the body straight to the side, not to the front or back.

Precaution: N/A

2. RECOVERY DRILL EXERCISE 2: REAR LUNGE

Purpose: This exercise develops flexibility of the hip flexors and trunk muscles (Figure 26).

Starting Position: Straddle stance, hands on hips.

Position 1: On the command “**Ready, STRETCH,**” take an exaggerated step backward with the left leg, touching down with the ball of the foot. This is the same position as count 1 of the rear lunge in the PD. Hold this position for 20-30 seconds.

Starting Position: On the command “**Starting Position, MOVE,**” assume the starting position.

Position 2: On the command “**Change Position, Ready, STRETCH,**” take an exaggerated step backward with the right leg, touching down with the ball of the foot. This is the same position as count 3 of the rear lunge in the PD. Hold this position for 20-30 seconds.

Starting Position: On the command “**Starting Position, MOVE,**” return to the starting position.

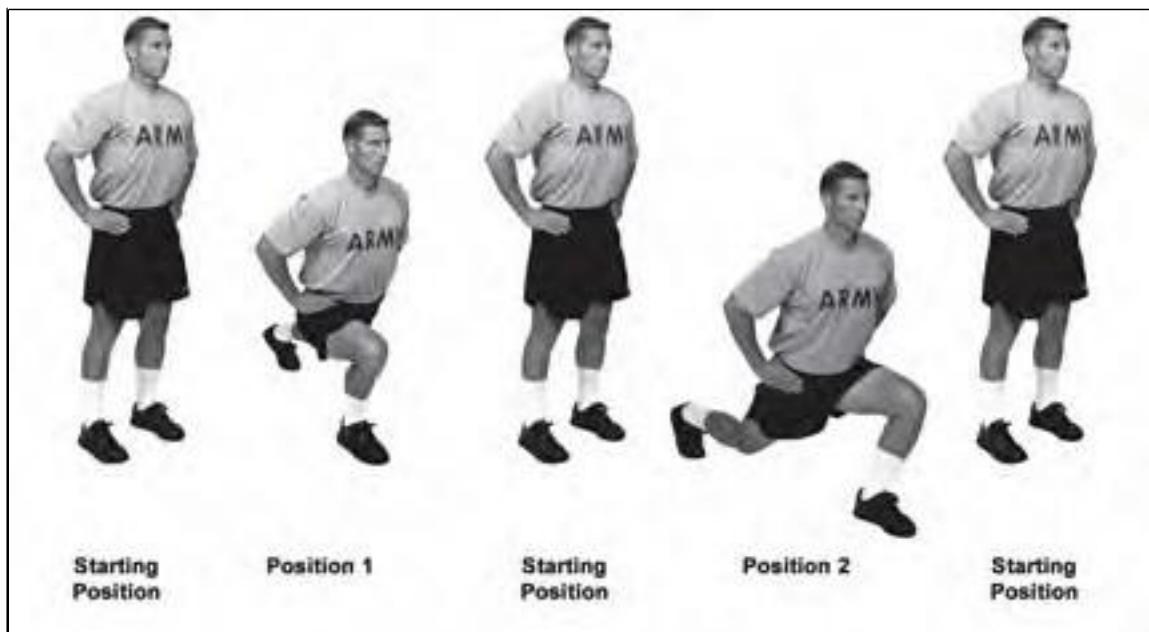


Figure 26. Rear Lunge

Check Points:

- Maintain straightness of the back by keeping the abdominal muscles tight throughout the motion.
- After the foot touches down on positions 1 and 2, allow the body to continue to lower.
- Lunge and step in a straight line, keeping the feet directed forward. Viewed from the front, the feet are shoulder width apart, both at the starting position and at the end of positions 1 and 2.
- Keep the forward knee over the ball of the foot on positions 1 and 2.
- Ensure the heel of the rear foot does not touch the ground.

Precaution: When lunging to the left or right, do not let the knee move forward of the toes.

3. RECOVERY DRILL EXERCISE 3: EXTEND AND FLEX

Purpose: This exercise develops flexibility of the hip flexors, abdominals, hip (position 1—extend, Figure 27), and the low back, hamstrings, and calves (position 2—flex, Figure 27).

Starting Position: The front leaning rest position.

Position 1: On the command “**Ready, STRETCH,**” lower the body, sagging in the middle, keeping the arms straight and look upward. Hold this position for 20-30 seconds.

Starting Position: On the command “**Starting Position, MOVE,**” assume the starting position.

Position 2: On the command “**Change Position, Ready, STRETCH,**” slightly bend the knees and raise the hips upward. Straighten the legs and try to touch the ground with the heels. Move the head in line with the arms, forming an “A” with the body. Keep the feet together and hold this position for 20-30 seconds.

Starting Position: On the command “**Starting Position, MOVE,**” return to the starting position.

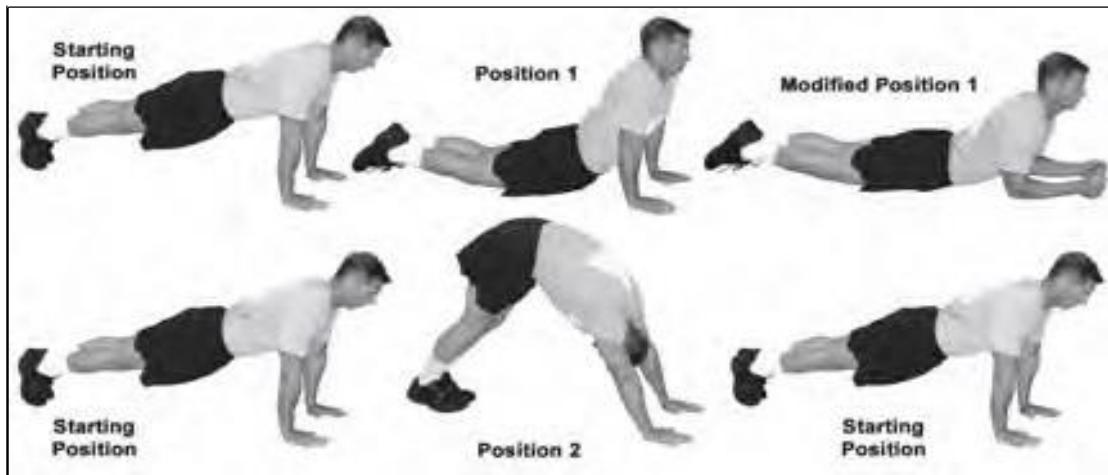


Figure 27. Extend and Flex

Check Points:

- In position 1, the thighs and pelvis rest on the ground. Relax the back muscles while bearing the bodyweight through the straight arms. Toes point to the rear.
- In position 2, the legs are straight and the arms are shoulder width apart, palms down on the ground.
- Relax the shoulders and push to the rear with the hands, forming an “A” with the body. Try not to round the shoulders.
- Feet are together throughout the exercise.

Precaution: N/A

Variation: Cadets, who are unable to extend the trunk in position 1 while keeping the arms straight and hips on the ground, may assume the modified position 1 shown above.

4. RECOVERY DRILL EXERCISE 4: THIGH STRETCH

Purpose: This exercise develops flexibility of the front of the thigh and the hip flexor muscles (Figure 28).

Starting Position: Seated position, arms at sides and palms on the floor.

Position 1: On the command “**Ready, STRETCH,**” roll onto the right side and place the right forearm on the ground, perpendicular to the chest. The right hand makes a fist on the ground with the thumb side up. Grasp the left ankle with the left hand and pull the left heel toward the buttocks and pull the entire leg rearward. Push the left thigh further to the rear with the heel of the right foot. Hold this position for 20-30 seconds.

Starting Position: On the command, “**Starting Position, MOVE,**” assume the starting position.

Position 2: On the command “**Change Position, Ready, STRETCH,**” lie on the left side and place the left forearm on the ground, perpendicular to the chest. The left hand makes a fist on the ground with the thumb side up. Grasp the right ankle with the right hand and pull the right heel toward the buttocks pulling the entire leg rearward. Push the right thigh further to the rear with the heel of the left foot. Hold this position for 20-30 seconds.

Starting Position: On the command, “**Starting Position, MOVE,**” return to the starting position.

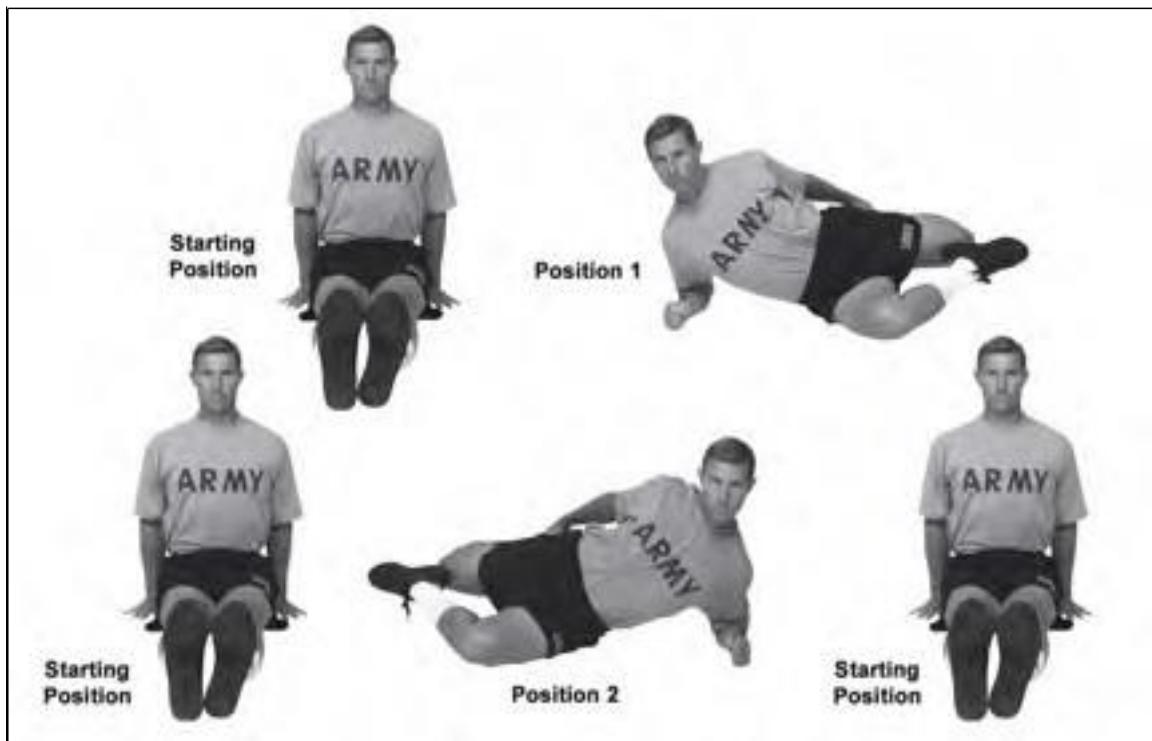


Figure 28. Thigh Stretch

Check Points:

- Keep the abdominal muscles tight throughout this stretch in order to keep the trunk straight.
- Do not pull the heel forcefully to the buttock if there is discomfort in the knee joint.

Precaution: N/A

RECOVERY DRILL EXERCISE 5: SINGLE-LEG OVER

Purpose: This exercise develops flexibility of the hips and lower back muscles (Figure 29).

Starting Position: Supine position with arms sideward, palms down, and feet together and head on the ground.

Position 1: On the command, “**Ready, STRETCH,**” turn the body to the right, bend the left knee to 90-degrees over the right leg, and grasp the outside of the left knee with the right hand and pull toward the right. Hold this position for 20-30 seconds.

Starting Position: On the command, “**Starting Position, MOVE,**” assume the starting position.

Position 2: On the command, “**Change Position, Ready, STRETCH,**” turn the body to the left, bend the right knee to 90-degrees over the left leg, and grasp the outside of the right knee with the left hand and pull toward the left. Hold this position for 20-30 seconds.

Starting Position: On the command, “**Starting Position, MOVE,**” return to the starting position.

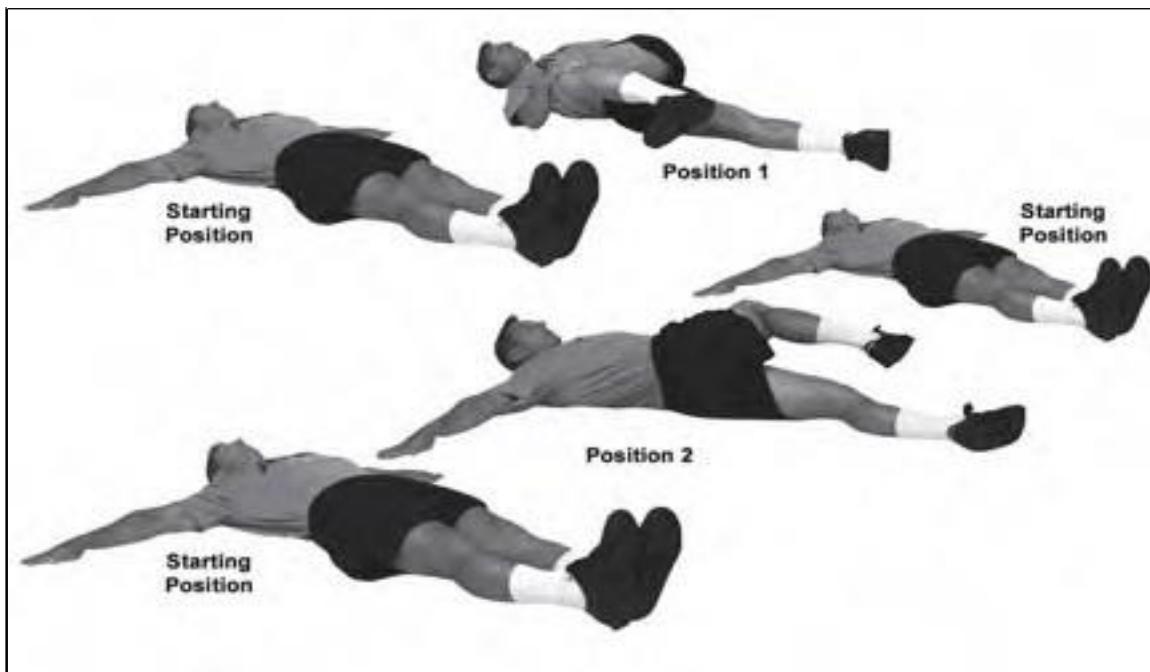


Figure 29. Single-Leg Over

Check Points:

- At the starting position, the arms are directed to the sides at 90-degrees to the trunk; the fingers and thumbs are extended and joined.
- In position 1, keep the left shoulder, arm, and hand on the ground.
- In position 2, keep the right shoulder, arm, and hand on the ground.
- Head remains on the ground throughout the exercise.

Precaution: N/A

4-8. Running, Circuits, and Other Physical Training

After conducting the Preparation Drill, the unit conducts an activity – usually some type of cardiovascular activity, like running, circuit training, grass drills, or sports. Making PT interesting by doing different activities not only keeps cadets' interest in the program, but exercises different muscles.

a. Running.

1. The purpose of running is to improve the overall conditioning of the Cadet by developing endurance. Endurance spans a continuum between aerobic and anaerobic systems. Aerobic endurance is developed by performing low to moderate intensity activities for a long duration. Anaerobic endurance is developed by performing high-intensity activities for a short duration, resting, and then repeating the sequence. Developing strength requires anaerobic exercise. Running activities described here may be performed individually or collectively.

2. Running can be conducted over a variety of terrain – roads, fields, tracks, wooded areas, or hills. For Cadets, it is best to stay on roads. Running on various terrain helps Cadets prepare for what is required in combat, but the likelihood of foot and ankle injuries is greatly increased. The risk outweighs the benefits of running over a variety of terrain.

3. Types of Runs:

(a) Ability Group Run. The Ability Group Run trains Cadets in groups of near-equal ability. Each ability group runs at a prescribed pace intense enough to produce a training effect for that group and each Cadet in it. Leaders should program these runs for specific lengths of time, not miles to be run. This training method provides a challenge for each ability group while controlling injuries. The PT leader conducts a 1-mile run assessment to assign Cadets in ability groups. Based on each Cadet's 1-mile run assessment time, the PT leader assigns the Cadet to one of the groups shown in Table 7.

A Group: 7:15 and faster
B Group: 7:16 to 8:15
C Group: 8:16 to 10:15
D Group: 10:16 and slower

Table 7. Sample Ability Group Assignment

Some Cadets may make the cut off times to qualify for an ability group but are unable to maintain the prescribed running pace listed in the PT schedule. If this occurs, they may drop down to the slower group and progress later to the faster running group. Ability group runs, speed running, and foot marching (greater than 5 km) should not be conducted on the same or consecutive days. The running duration is determined by time, not distance. Cadets should move to faster groups when they are ready because they progress at different rates. Those who have difficulty maintaining the specified pace within an ability group should be placed in a slower ability group. Supervision will prevent a constant shifting of Cadets between groups due to lack of individual effort. Routes used for sustained running in ability groups should be well lighted, free from hazards and traffic, and marked at $\frac{1}{4}$ -mile intervals. Ability group leaders will ensure running is at the proper pace prescribed for their group by checking their split times at each $\frac{1}{4}$ -mile marker along the route.

(b) Unit Formation Run. The unit formation run elicits intangible rewards gained from running with a group, such as esprit de corps, team building, and discipline. Unit formation runs are based on a time and/or distance that can be achieved with unit integrity and a display of unit cohesion. Unit formation runs are organized by squad, platoon, company, or battalion; not by ability. Keeping a large unit in step, with proper distance intervals and correct running form, offers intangible benefits that commanders desire. Commanders should not use unit formation runs as the foundation of their PT program. They should be performed no more than once per month due to the limited training effect offered for the entire unit. The unit commander is responsible for establishing a pace achievable by all Cadets in the unit.

(c) Release Run. The release run combines the benefits of formation running and individual performance at higher training intensities. Cadets will run in formation for a specified time (no more than

10 minutes), then released to run as fast as they can back to the starting point. Upon completion of the release run, additional PT activities may be conducted or recovery performed.

(d) Last Man Up Run. The last man up run combines sprinting with longer distance running. It is usually done with a relatively small group of 20 Cadets or less. The unit forms in a single file and the run is conducted much like a unit formation run. After the unit has been running for a couple of minutes, the PT Leader indicates by a command ("Go" works well) that the last Cadet in line is to sprint up to the front of the formation. That cadet then falls into the first position in the file. The PT Leader, at his discretion, then commands the Cadet who is now last in the file to Go, and he sprints to the front and falls into the front position. This continues throughout the run.

b. Circuit Training

1. A circuit is a group of stations or areas where specific tasks or exercises are performed. The task or exercise selected for each station and the arrangement of the stations is determined by the objective of the circuit. Circuits are designed to provide exercise to groups of cadets at intensities which suit each person's fitness level. Circuits can promote fitness in a broad range of physical and motor fitness areas. These include cardiorespiratory endurance, muscular endurance, strength, flexibility, and speed. Circuits can also be designed to concentrate on sports skills. In addition, circuits can be organized to exercise all the fitness components in a short period of time. A little imagination can make circuit training an excellent addition to a unit's total physical fitness program. At the same time, it can provide both fun and a challenge to cadets' physical and mental abilities. Almost any area can be used, and any number of cadets can exercise for various lengths of time.

2. Types of Circuits. The two basic types of circuits are the free circuit and the fixed circuit. Each has distinct advantages.

(a) Free Circuit. In a free circuit, there is no set time for staying at each station, and no signal is given to move from one station to the next. Cadets work at their own pace, doing a fixed number of repetitions at each station. Progress is measured by the time needed to complete a circuit. Because cadets may do incomplete or fewer repetitions than called for to reduce this time, the quality and number of the repetitions done should be monitored. Aside from this, the free circuit requires little supervision.

(b) Fixed Circuit. In a fixed circuit, a specific length of time is set for each station. The time is monitored with a stopwatch, and cadets rotate through the stations on command. There are three basic ways to increase the intensity or difficulty of a fixed circuit:

- Keep the time for completion the same, but increase the number of repetitions.
- Increase the time per station along with the number of repetitions.
- Increase the number of times cadets go through the circuit.

3. Several variables in circuit training must be considered. These include the time, number of stations, number of cadets, number of times the circuit is completed, and sequence of stations. These are discussed below.

(a) Time. One of the first things to consider is how long it should take to complete the circuit. When a fixed circuit is run, the time at each station should always be the same to avoid confusion and help maintain control. Consider also the time it takes to move from one station to the next. Further, allow from five to seven minutes both before and after running a circuit for warming up and cooling down, respectively.

(b) Number of Stations. The objective of the circuit and time and equipment available strongly influence the number of stations. A circuit geared for a limited objective (for example, developing lower-body strength) needs as few as six to eight stations. On the other hand, circuits to develop both strength and cardiorespiratory fitness may have as many as 20 stations.

(c) Number of Cadets. If there are 10 stations and 40 cadets to be trained, the cadets should be divided into 10 groups of four each. Each station must then be equipped to handle four cadets. For example, in this instance a rope jumping station must have at least four jump ropes. It is vital in a free circuit that no cadet stand around waiting for equipment. Having enough equipment reduces bottlenecks, slowdowns, and poor results.

(d) Number of Times a Circuit is Completed. To achieve the desired training effect, cadets may have to repeat the same circuit several times. For example, a circuit may have ten stations. Cadets may run through the circuit three times, exercising for 30 seconds at each station, and taking 15 seconds to move between stations. The exercise time at each station may be reduced to 20 seconds the second and third time through. The whole workout takes less than 45 minutes including warm-up and cool-down. As cadets become better conditioned, exercise periods may be increased to 30 seconds or longer for all three rotations. Another option is to have four rotations of the circuit.

(e) Sequence of Stations. Stations should be arranged in a sequence that allows cadets some recovery time after exercising at strenuous stations. Difficult exercises can be alternated with less difficult ones. After the warm-up, cadets can start a circuit at any station and still achieve the objective by completing the full circuit.

(f) Designing a Circuit. See CACC Curriculum on Wellness, Fitness Training Strand, Lesson A4.

c. Grass Drills.

1. Grass drills are exercise movements that feature rapid changes in body position. These are vigorous drills which, when properly done, exercise all the major muscle groups. Cadets should respond to commands as fast as possible and do all movements at top speed. They continue to do multiple repetitions of each exercise until the next command is given. No cadence is counted. Performing grass drills can improve CR endurance, help develop muscular endurance and strength, and speed up reaction time. Since these drills are extremely strenuous, they should last for short periods (30 to 45 seconds per exercise). The two drills described here each have four exercises. Leaders can develop additional drills locally.

2. The cadets should do a warm-up before performing the drills and do a cool-down afterward. The instructor does all the activities so that he can gauge the intensity of the session. The commands for grass drills are given in rapid succession without the usual preparatory commands. To prevent confusion, commands are given sharply to distinguish them from comments or words of Encouragement. As soon as the cadets are familiar with the drill, they do all the exercises as vigorously and rapidly as possible, and they do each exercise until the next command is given. Anything less than a top-speed performance decreases the effectiveness of the drills. Once the drills start, cadets do not have to resume the position of attention. The instructor uses the command "Up" to halt the drill for instructions or rest. At this command, cadets assume a relaxed, standing position. Grass drills can be done in a short time. For example, they may be used when only a few minutes are available for exercise or when combined with another activity. Sometimes, if time is limited, they are a good substitute for running. Most movements are done in place. The extended-rectangular formation is best for a platoon- or company-sized unit. The circle formation is more suitable for squad- or section-sized groups. When cadets are starting an exercise program, a 10- to 15-minute workout may be appropriate. Progression is made by a gradual increase in the time devoted to the drills. As the fitness of the cadets improves, the times should be gradually lengthened to 20 minutes. The second drill is harder than the first. Therefore, as cadets progress in the first drill, the instructor should introduce the second. If he sees that the drill needs to be longer, he can repeat the exercises or combine the two drills.

3. STARTING POSITIONS. After the warm-up, bring the cadets to a position of **ATTENTION**. The drills begin with the command **GO**. Other basic commands are **FRONT**, **BACK**, and **STOP**. (See Figure 30 for the positions and actions associated with these commands.)

- **ATTENTION:** The position of attention is described in FM 22-5, Drill and Ceremonies.
- **GO:** This involves running in place at top speed on the balls of the feet. The cadet raises his knees high, pumps his arms, and bends forward slightly at the waist.
- **FRONT:** The cadet lies prone with elbows bent and palms directly under the shoulders as in the down position of the push up. The legs are straight and together with the head toward the instructor.
- **BACK:** The cadet lies flat on his back with his arms extended along his sides and his palms facing downward. His legs are straight and together; his feet face the instructor.

- **STOP** The cadet assumes the stance of a football lineman with feet spread and staggered. His left arm is across his left thigh; his right arm is straight. His knuckles are on the ground; his head is up, and his back is roughly parallel to the ground.
4. To assume the FRONT or BACK position from the standing GO or STOP positions, the cadet changes positions vigorously and rapidly. (See Figure 30.)
5. To change from the FRONT to the BACK position (Figure 30), the cadet does the following:
 - Takes several short steps to the right or left.
 - Lifts his arm on the side toward which his feet move.
 - Thrusts his legs vigorously to the front.
 6. To change from the BACK to the FRONT position, the cadet sits up quickly. He places both hands on the ground to the right or left of his legs. He takes several short steps to the rear on the side opposite his hands. When his feet are opposite his hands, he thrusts his legs vigorously to the rear and lowers his body to the ground. (See Figure 30.)

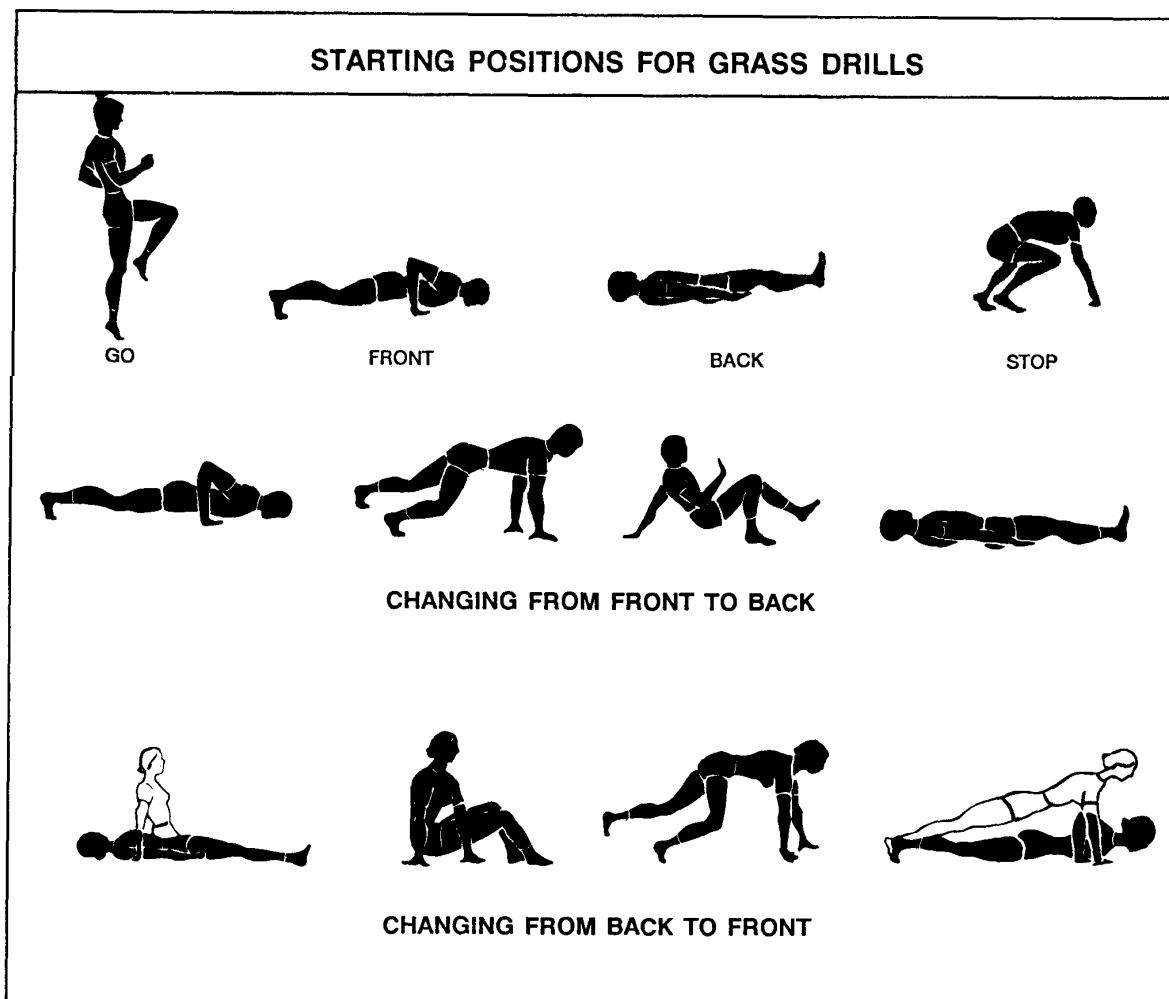


Figure 30. Starting Positions for Grass Drills

7. GRASS DRILL ONE: Exercises for Grass Drill One are described below and shown in Figure 31.

Bouncing Ball: From the FRONT position, push up and support the body on the hands (shoulder-width apart) and feet. Keep the back and legs generally in line and the knees straight. Bounce up and down in a series of short, simultaneous, upward springs from the hands, hips, and feet.

Supine Bicycle: From the BACK position, flex the hips and knees. Place the palms directly on top of the head, and interlace the fingers. Bring the knee of one leg upward toward the chest. At the same time, curl the trunk and head upward while touching the opposite elbow to the elevated knee. Repeat with the other leg and elbow. Continue these movements as opposite legs and arms take turns.

Knee Bender: From the position of ATTENTION, do half-knee bends with the feet in line and the hands at the sides. Make sure the knees do not bend to an angle less than 90 degrees. Roll Left and Right from the FRONT position, continue to roll in the direction commanded until another command is given. Then, return to the FRONT position.

GRASS DRILL TWO: Exercises for Grass Drill Two are described below and shown in Figure 31.

The Swimmer: From the FRONT position, extend the arms forward. Move the right arm and left leg up and down; then, move the left arm and right leg up and down. Continue in an alternating manner.

Bounce and Clap Hands: The procedure is almost the same as for the bouncing ball in grass drill one. However, while in the air, clap the hands. This action requires a more vigorous bounce or spring. The pushup may be substituted for this exercise.

Leg Spreader: From the BACK position, raise the legs until the heels are no higher than six inches off the ground. Spread the legs apart as far as possible, then put them back together. Keep the head off the ground. Throughout, place the hands under the upper part of the buttocks, and slightly bend the knees to ease pressure on the lower back. Open and close the legs as fast as possible. The curl-up may be substituted for this exercise.

Forward Roll: From the STOP position, place both hands on the ground, tuck the head, and roll forward. Keep the head tucked while rolling.

Stationary Run: From the position of ATTENTION, start running in place at the GO command by lifting the left foot first. Follow the instructor as he counts two repetitions of cadence. For example, "One, two, three, four; one, two, three, four." The instructor then gives informal commands such as the following: "Follow me," "Run on the toes and balls of your feet," "Speed it up," "Increase to a sprint, raise your knees high, lean forward at your waist, and pump your arms vigorously," and "Slow it down." To halt the exercise, the instructor counts two repetitions of cadence as the left foot strikes the ground: "One, two, three, four, one, two, three, HALT."

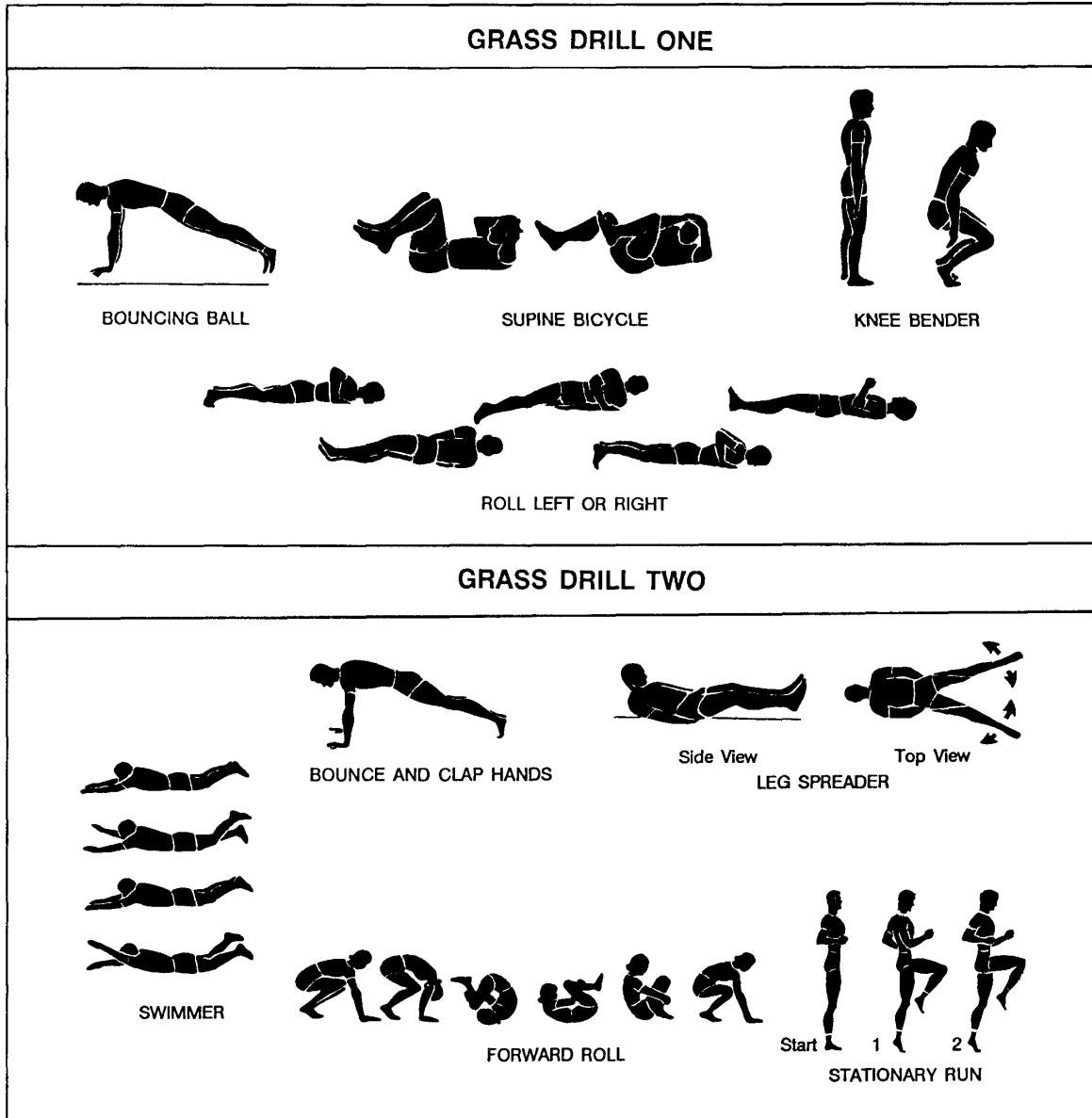


Figure 31. Grass Drill Exercises

d. Sports. Many sports are appropriate for fitness activities in the CA Cadet Corps class. Basketball, soccer, volleyball, ultimate Frisbee, and other sports offer a good workout and team focus.

e. Unit Olympics. The Unit Olympics is a multifaceted event that can be tailored to any unit to provide athletic participation for all cadets. The objective is to incorporate into a team-level competition athletic events that represent all five fitness components. The competition can be within a unit or between competing units. When conducted with enthusiasm, it promotes team spirit and provides a good workout. It is a good diversion from the regular PT session.

1. Types of Events. The Olympics should include events that challenge the cadets' muscular strength and endurance, aerobic endurance, flexibility, agility, speed, and related sports skills. Events can be held for both individuals and teams, and they should be designed so that both male and female cadets can take part. Each cadet should be required to do a minimum number of events. Teams should wear a

distinctively marked item such as a T-shirt or arm band. This adds character to the event and sets teams apart from each other. A warm-up should precede and a cool-down should follow the events. The following are examples of athletic events that could be included in a Unit Olympics:

Push-Up Derby. This is a timed event using four-member teams. The objective is for the team to do as many correct push-ups as possible within a four-minute time limit. Only one team member does push-ups at a time. The four team members may rotate as often as desired.

Sandbag Relay. This event uses four-member teams for a running relay around a quarter-mile track carrying sandbags. One player from each team lines up at the starting line carrying a full sandbag. He hands the sandbag off to a teammate when he finishes his part of the race. This continues until the last team player crosses the finish line. Placings are determined by the teams' order of finish.

Team Flexibility. In this event, if teams are numerically equal, all members of each team should participate. If not, as many team members should participate as possible. Each team's anchor person places his foot against a wall or a curb. He stretches his other foot as far away as possible as in doing a split. The next team member puts one foot against the anchor man's extended foot and does a split-stretch. This goes on until all team members are stretched. They cover as much distance as possible keeping in contact with each other. The team that stretches farthest from the start point without a break in their chain is the winner.

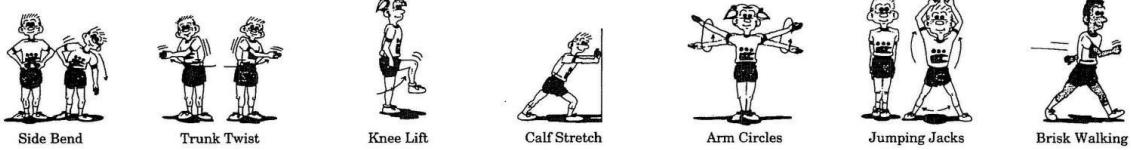
Running, Sprints and Relays. You can do any number of options of longer distance running, sprints and relays. The team can split, sending their best runners or sprinters on the harder routes, or the whole team can run/sprint each route. With different lengths, you can get a lot of mileage out of running, sprinting, and relays.

APPENDIX A

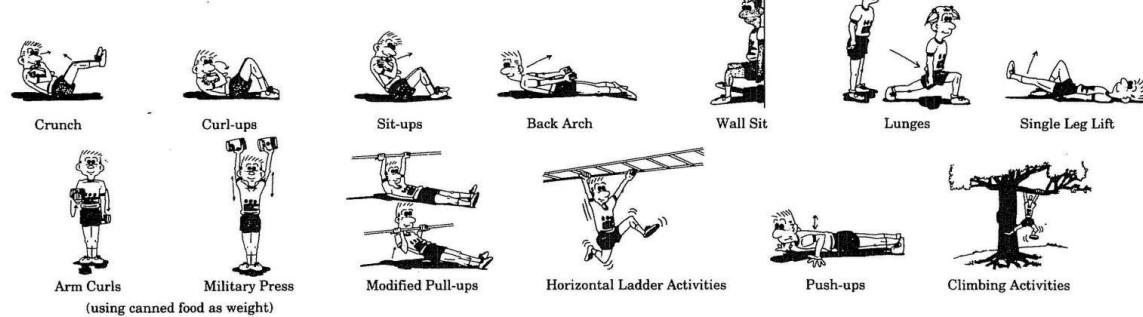
Get Fit Exercises

Get Fit Exercises

WARM-UP ACTIVITIES



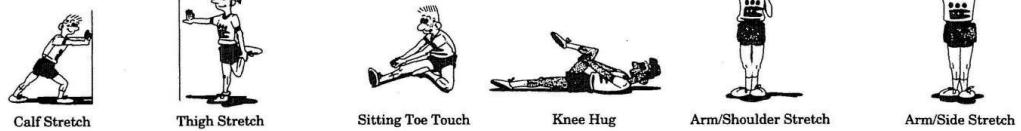
STRENGTH DEVELOPMENT ACTIVITIES



AEROBIC ACTIVITIES

Jogging Cycling Swimming Brisk Walking Rope Jumping Soccer Basketball

COOL-DOWN ACTIVITIES



APPENDIX B

Physical Fitness Test Log and Goal Sheet

Two-Month Cadet Corps Physical Fitness Test Log and Goal Sheet		Name: _____							
TEST	DATE 1 (baseline)	GOAL	DATE 2	DATE 3	DATE 4	DATE 5	DATE 6	DATE 7	DATE 8
One-Mile Run time in minutes & seconds									
Curl-Ups (# completed)									
Trunk-Lift (# inches off the ground)									
Push-Ups (# completed)									
Sit & Reach (Left side distance)									
Sit & Reach (Right side distance)									
Shoulder Stretch (Left arm over head)	yes no	yes	yes no						
Shoulder Stretch (Right arm over head)	yes no	yes	yes no						

Cadet Reflection: As you turn in this log and goal sheet, answer the following questions on another sheet of paper:

1. For each test, did you meet your goals during the two-month period?
2. What behaviors do you think helped you meet or approach your goals?
3. What behaviors do you think COULD HAVE helped you meet or approach your goals had you implemented them?
4. What will you do differently in the next two-month period to achieve your goals?

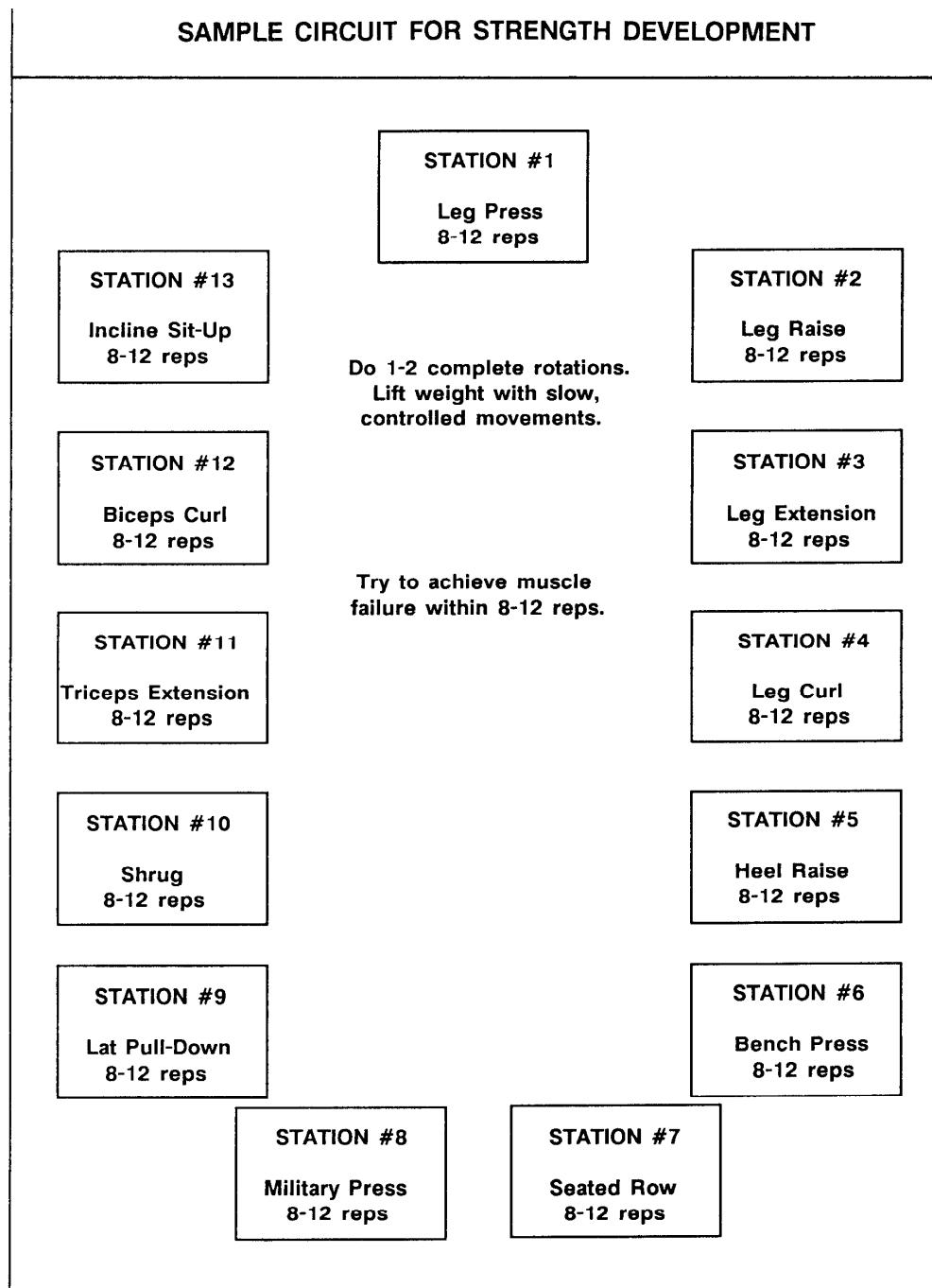
APPENDIX C

OPTIONAL SAMPLE PFT SCORESHEET

APPENDIX D

SAMPLE CIRCUIT TRAINING DIAGRAMS

SAMPLE CIRCUIT FOR STRENGTH DEVELOPMENT



SAMPLE CIRCUIT FOR CARDIORESPIRATORY ENDURANCE

STATION #14

All-Fours Run
30 seconds

STATION #1

Stationary Run
30 seconds

STATION #2

Push-Up
30 seconds

STATION #13

Mule Kicks
30 seconds

STATION #3

Side-Straddle Hop
30 seconds

STATION #12

Twisting Sit-up
30 seconds

STATION #4

Sit-Up
30 seconds

STATION #11

Steam Engine
30 seconds

STATION #5

Ski Jumps
30 seconds

STATION #10

Knee Bender
30 seconds

STATION #6

Flutter Kicks
30 seconds

STATION #9

Bicycle
30 seconds

STATION #7

Bend and Reach
(done slowly)
30 seconds

Do 2-3 complete rotations.

Stations may be 25-30 meters apart to allow more running.

STATION #8

Wide-Hand Push-Ups
30 seconds

**SAMPLE CIRCUIT FOR
PUSH-UP AND SIT-UP IMPROVEMENT**

STATION #1

Elevated Push-Up
30 seconds
Elevated Push-Up
30 seconds

STATION #8

Bicycle
30 seconds

STATION #2

Twisting Sit-Up
30 seconds

STATION #7

Close-Hand Push-Up
30 seconds

STATION #3

Parallel Dips
30 seconds

STATION #6

Flutter Kick
30 seconds

STATION #4

Sit-Up
30 seconds

Do 1-2 complete rotations.

Time may decrease to 20 sec
on the second rotation.

STATION #5

Wide-Hand Push-Up
30 seconds

Move immediately from
station to station. If too
fatigued, push-ups may be
done on the knees.