

## Chapter 14

# Climbing Drills

Climbing and surmounting obstacles are essential soldier skills. The drills described in this chapter are designed to enhance the body management necessary for successful climbing.

### SECTION I – CLIMBING DRILLS

14-1. The purpose of the climbing drills is to improve upper body and core strength and the ability to climb and negotiate obstacles. Success in climbing and surmounting obstacles depends on both conditioning and technique. This chapter includes exercises that condition the muscles of the body that are predominant in climbing. Specific techniques of obstacle negotiation are covered in Chapter 17. The entire body is involved during climbing, by helping to change or stabilize position. The hands and feet act as anchor points and initiate movement to the next position. The abdominal and back muscles stabilize the body's position. The arms push and pull upward with assistance from the much stronger legs. The climbing drills combined with calisthenic, dumbbell, guerrilla, and log drills comprise a balanced program for developing functional strength. Climbing drills are performed during the activity part of a physical readiness training (PRT) session with the dumbbell drill, log drill, or Guerrilla Drill 2.

#### TRAINING AREA

14-2. The climbing drills are performed on climbing bars that meet the specifications listed in paragraph 14-4 and shown in Appendix D. To conduct the climbing drills in mass, a minimum of one bar is required for every three soldiers. When the climbing drills are coupled with the Dumbbell Drill, Log Drill, or Guerrilla Drill 2, a minimum of one bar is required for every six soldiers.

#### UNIFORM

14-3. Soldiers will wear BDUs and boots or PFU. BDUs and boots will be worn when performing the climbing drills in combination with the Log Drill or Guerrilla Drill 2. Additional equipment such as LCE, kevlar, and, weapon will be used when performing Climbing Drill 2 in the sustaining phase.

#### EQUIPMENT

14-4. The climbing drills are conducted on climbing bars. The thickness of the bars is one and a half-inch outside diameter. The bars are supported by 6x6 pressure treated posts sunk at least three feet into the ground and

secured with cement. The bar distance from inside post to inside post must be at least five feet. The bars should be no more than eight feet off the ground. A variety of heights and/or steps should be available to accommodate all soldiers. Figure 14-1 shows the recommended climbing bar apparatus. Refer to Appendix D for specifications for the climbing bar apparatus.



Figure 14-1. Climbing Bar Apparatus

## FORMATION

14-5. Three soldiers are assigned to each bar with one soldier exercising and two soldiers spotting.

## LEADERSHIP

### INSTRUCTION AND EXECUTION

14-6. A PRT leader and assistant instructor (AI) are required to instruct and lead climbing drills. The PRT leader must be familiar with the method of teaching these exercises, commands, counting cadence, cumulative count, formations, and utilization of AI(s) as described in Chapter 6. **The PRT leader must ensure that spotters are properly trained and maintain positive control at all times.** Soldiers should memorize the exercises by name and movement. The exercises are always given in cadence. Three soldiers are assigned to each bar with one soldier exercising and two soldiers spotting. Soldiers rotate during each exercise until all three have completed the exercise, before the PRT leader moves to the next exercise. Considerable time and effort must be expended during the early stages to teach precise performance of each exercise.

## PRECISION

14-7. Climbing Drills lose much of their value unless performed exactly as prescribed. Spotters are used to ensure precision and safety by assisting the soldiers when fatigued or unable to properly execute five repetitions on their own. Two spotters will assist soldiers through each exercise. As soldiers become more proficient in each exercise, they will need less assistance and eventually should be able to perform the drill unassisted. **However, spotters will always be present to ensure safety and precise exercise execution.** Spotters will help as needed to minimize swinging and stabilize body position. Refer to Figure 14-2 for proper spotting positions and techniques. Precision should never be compromised for quantity of repetitions or speed of movement. Soldiers should perform all movements in a controlled manner without jerking into or out of positions. Soldiers should avoid relaxing in the extended hang position, as this may place excessive stress on the shoulder and elbow joints. Soldiers should maintain a contraction in the muscles of the shoulders and upper back tight to avoid a relaxed extended hang.



Figure 14-2. Spotting Front/Rear and Left/Right Sides

## PROGRESSION

14-8. In the toughening phase, soldiers always perform five repetitions of each exercise in Climbing Drill 1 with or without assistance, using only their body weight as resistance. **The goal is to be able to perform the five repetitions of all five exercises unassisted.**

14-9. In the sustaining phase, soldiers perform Climbing Drill 2 while under load. Soldiers increase resistance by wearing LBE, Kevlar, and weapon. Spotters provide assistance until soldiers can complete all five exercises without help. **Climbing Drill 2 is performed only in the sustaining phase.**

## INTEGRATION

14-10. The primary emphasis of the climbing drills is functional strength development. The use of equipment in Climbing Drill 2 develops the soldiers' ability to manipulate their body weight under load. The various exercises also involve movements that require mobility. When performed in combination with calisthenic and dumbbell drills, the climbing drills also contribute to the development of endurance.

## COMMANDS

14-11. Climbing Drills 1 and 2 consist of five, 2-count exercises.

## BEGINNING CLIMBING EXERCISES TO CADENCE

14-12. Once soldiers have learned the exercises by the numbers, the PRT leader merely needs to indicate the name of the exercise, command the soldiers to assume the starting position, and start them exercising to cadence. This is how the PRT leader begins Exercise 1 of Climbing Drill 1, The Straight-arm Pull to cadence:

- The PRT leader indicates which soldier will be exercising (the climbing drills require 3 individuals, 1 exerciser and 2 spotters).
- The PRT leader states, "**The Straight-arm Pull.**"
- The soldiers respond, "**The Straight-arm Pull.**"
- The PRT leader commands, "***Starting Position*, MOVE.**" The soldiers assume the starting position.
- The PRT leader commands, "***In Cadence*,**" (soldiers respond, "In Cadence), "**EXERCISE, ONE, TWO.**"
- The soldiers state, "**ONE.**"
- The PRT leader commands, "**DISMOUNT.**" Soldiers dismount the bar utilizing the foot steps and change position with one of the spotters.

## COUNTING CADENCE

14-13. Counting cadence ensures that exercises are performed at the appropriate speed. All climbing drill exercises are performed at a moderate cadence (one count per second). The cumulative count is a method of indicating the number of repetitions of an exercise on the second count of a 2-count exercise or the fourth count of an 4-count exercise. The use of the cumulative count is required for the following reasons:

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

14-14. The PRT leader counts out the movements of each exercise and the soldiers state the number of repetitions performed on count two. A 2-count exercise is counted as follows:

- The PRT leader counts, "**ONE, TWO.**"

- The soldiers respond, “ONE.”
- The PRT leader counts, “ONE, TWO.”
- The soldiers respond, “TWO.”
- The PRT leader counts, “ONE, TWO.”
- The soldiers respond, “THREE,” etc.

### TERMINATING CLIMBING EXERCISES TO CADENCE

14-15. To terminate an exercise, the PRT leader will raise the inflection of his voice while counting out the cadence of the last repetition. The soldiers and PRT leader respond with **HALT** upon returning to the starting position. A 2-count exercise is terminated as follows:

- The PRT leader counts, “ONE, TWO.”
- The soldiers respond, “FOUR.”
- The PRT leader counts, “ONE, TWO.” (with voice inflection).
- The soldiers and PRT leader respond, “HALT.”

### HAND POSITIONS

14-16. A variety of hand positions are employed throughout the drills to thoroughly train the musculature of the arms, forearms and hands (refer to Figure 14-3). Hands are placed shoulder width apart with thumbs around the bar for the overhand and underhand grips. Hands are placed next to each other with thumbs around the bar for the alternating grips.



Overhand Grip



Alternating Grip Left



Alternating Grip Right

Figure 14-3. Hand Positions

## SECTION II – CLIMBING DRILL 1

14-17. Climbing Drill 1 improves upper body and core strength and the ability to climb and negotiate obstacles. **The drill is always performed in its entirety in the order listed.** In the toughening phase, soldiers always perform five repetitions of each exercise in Climbing Drill 1 with or without assistance, using only their body weight as resistance. **The goal is to be able to perform the five repetitions of all five exercises unassisted.** If a second set is performed, the entire drill is repeated in the order listed.

### Climbing Drill 1, Exercise 1 The Straight-arm Pull

**Purpose:** This exercise develops the ability to initiate the pull-up motion and maintain a contraction in the extended hang position.

**Starting Position:** Extended hang using the overhand grip.

**Cadence:** Moderate.

**Count:**

1. Keeping the arms straight, pull the body upward using the shoulders and upper back muscles only.
2. Return to the starting position.



Starting Position



Count 1



Count 2

**Check Points:**

- Throughout the exercise, arms are shoulder width, palms facing away from the body, with thumbs around the bar.
- Throughout the exercise, keep the elbows straight, but not locked.
- On count one, pull the body up by engaging the shoulder muscles (squeeze the shoulder blades together).

### Climbing Drill 1, Exercise 2 The Heel Hook

**Purpose:** This exercise develops the ability to raise the legs from a hanging position and hook the feet securely on the bar.

**Starting Position:** Extended hang using the alternating grip, left or right.

**Cadence:** Moderate

**Count:**

1. Pull with the arms and curl the lower body toward the bar. Raise the feet above the bar and interlock them securely around the bar.
2. Return to the starting position.



Starting Position



Count 1



Count 2

**Check Points:**

- Secure the feet over the bar by crossing one foot over the other at the ankles.
- On count one, initiate movement by first pulling with the arms.
- On count two, the arms will be fully extended to return to the starting position.

**Precautions:** Spotters will start with one hand on the lower back and one hand behind the thigh. On count one, spotters must maintain positive control of the exerciser's upper body. This is accomplished by sliding the hand from the lower back to the middle of the back and simultaneously moving the other hand from the back of the thigh to the lower back just before the exerciser hooks the feet around the bar. On count two, the spotter will return the hands to the lower back and behind the thigh after the exerciser has unhooked the feet from the bar to return to the starting position.

### Climbing Drill 1, Exercise 3 The Pull-up

**Purpose:** This exercise develops the ability to pull the body upward while hanging.

**Starting Position:** Extended hang using the overhand grip.

**Cadence:** Moderate.

**Count:**

1. Keeping the body straight, pull upward with the arms until the chin is above the bar.
2. Return to the starting position.



Starting Position



Count 1



Count 2

**Check Points:**

- Throughout the exercise, keep the feet together.
- Throughout the exercise, arms are shoulder width, palms facing away from the body, with thumbs around the bar.

### Climbing Drill 1, Exercise 4 The Leg Tuck

**Purpose:** This exercise develops the abdominal, hip flexor, and grip strength essential to climbing a rope.

**Starting Position:** Extended hang using the alternating grip, left or right.

**Cadence:** Moderate.

**Count:**

1. Pull up with the arms and raise the knees toward the chest until the elbows touch the thighs just above the knees.
2. Return to the starting position.



Starting Position



Count 1



Count 2

**Check Points:**

- Throughout the exercise, keep the feet together.
- On count one, the thighs and elbows touch just above knees.

### Climbing Drill 1, Exercise 5 The Alternating Grip Pull-up

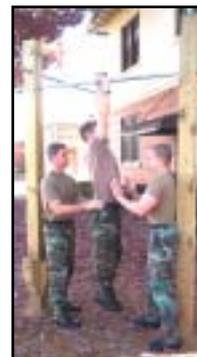
**Purpose:** This exercise develops the muscles used to pull the body upward while hanging with an alternating grip.

**Starting Position:** Extended hang using the alternating grip, right or left.

**Cadence:** Moderate.

**Count:**

1. Keeping the body straight, pull upward, allowing the head to move to the left or right side of the bar and touch the right or left shoulder to the bar.
2. Return to the starting position.



Starting Position



Count 1



Count 2

**Check Points:**

- If the alternating grip left is used, soldiers should touch their left shoulder to the bar on count one.
- If the alternating grip right is used, soldiers should touch their right shoulder to the bar on count one.
- On count two, the arms are fully extended to return to the starting position.
- Throughout the exercise, keep the feet together.

## SECTION III – CLIMBING DRILL 2

14-18. Climbing Drill 2 is a performance-oriented drill that prepares soldiers for critical tasks such as climbing and traversing a rope and pulling the body up on to a ledge or through a window under fighting load. Soldiers increase the resistance by performing the drill with their LBE, Kevlar, and weapon. Soldiers will perform five repetitions of each exercise. Spotters provide assistance until soldiers can complete all repetitions without assistance. **Climbing Drill 2 is performed only in the sustaining phase.**

## Climbing Drill 2, Exercise 1 The Flexed-arm Hang

**Purpose:** This exercise develops the ability to hold the body in the flexed-arm hang position.

**Starting Position:** Extended hang using the overhand grip.

**Cadence:** Moderate.

**Count:**

1. Keeping the body straight, pull upward with the arms until the chin is above the bar and hold for five seconds.
2. Return to the starting position.



Starting Position



Count 1



Count 2

**Check Points:**

- Throughout the exercise, the palms are facing away from the body, with thumbs around the bar.
- Throughout the exercise, keep the feet together.

## Climbing Drill 2, Exercise 2 The Heel Hook

**Purpose:** This exercise develops the ability to raise the legs from a hanging position and hook the feet securely on the bar.

**Starting Position:** Extended hang using the alternating grip, left or right.

**Cadence:** Moderate.

**Count:**

1. Pull with the arms and the body toward the bar. Raise the feet above the bar and interlock them securely around the bar.
2. Return to the starting position.



Starting Position



Count 1



Count 2

### Check Points:

- Secure the feet over the bar by crossing one foot over the other at the ankles.
- On count one, initiate movement by first pulling with the arms.
- On count two, the arms will be fully extended to return to the starting position.

**Precautions:** Spotters will start with one hand on the lower back and one hand behind the thigh. On count one, spotters must maintain positive control of the exerciser's upper body. This is accomplished by sliding the hand from the lower back to the middle of the back and simultaneously moving the other hand from the back of the thigh to the lower back just before the exerciser hooks the feet around the bar. On count two, the spotter will return the hands to the lower back and behind the thigh after the exerciser has unhooked the feet from the bar to return to the starting position.

### Climbing Drill 2, Exercise 3 The Pull-up

**Purpose:** This exercise develops the ability to pull the body upward while hanging.

**Starting Position:** Extended hang using the overhand grip.

**Cadence:** Moderate.

**Count:**

1. Keeping the body straight, pull upward with the arms until the chin is above the bar.
2. Return to the starting position.



Starting Position



Count 1



Count 2

**Check Points:**

- Throughout the exercise, keep the feet together.
- Throughout the exercise, arms are shoulder width, palms facing away from the body, with thumbs around the bar.

### Climbing Drill 2, Exercise 4 The Leg Tuck

**Purpose:** This exercise develops the abdominal, hip flexor, and grip strength essential to climbing a rope.

**Starting Position:** Extended hang using the alternating grip, left or right.

**Cadence:** Moderate.

**Count:**

1. Pull up with the arms and raise the knees toward the chest until the elbows touch the thighs just above the knees.
2. Return to the starting position.



Starting Position



Count 1



Count 2

**Check Points:**

- Throughout the exercise, keep the feet together.
- On count 1, the thighs and elbows touch just above knees.

### Climbing Drill 2, Exercise 5 The Alternating Grip Pull-up

**Purpose:** This exercise develops the ability to pull the body upward while hanging with an alternating grip.

**Starting Position:** Extended hang using the alternating grip, right or left.

**Cadence:** Moderate.

**Count:**

1. Keeping the body straight, pull upward, allowing the head to move to the left or right side of the bar and touch the right or left shoulder to the bar.
2. Return to the starting position.



Starting Position



Count 1



Count 2

**Check Points:**

- If the alternating grip left is used, soldiers should touch the left shoulder to the bar on count one.
- If the alternating grip right is used, soldiers should touch the right shoulder to the bar on count one.
- On count two, the arms are fully extended to return to the starting position.
- Throughout the exercise, keep the feet together.

## **SECTION IV - SUMMARY**

**14-19.** The ability to climb and negotiate obstacles is essential to the accomplishment of critical soldier tasks. The climbing drills, when performed regularly, enhance the body management required to successfully perform these critical tasks. The climbing drills combined with calisthenic, dumbbell, guerrilla, and log drills comprise a balanced program for developing functional strength.