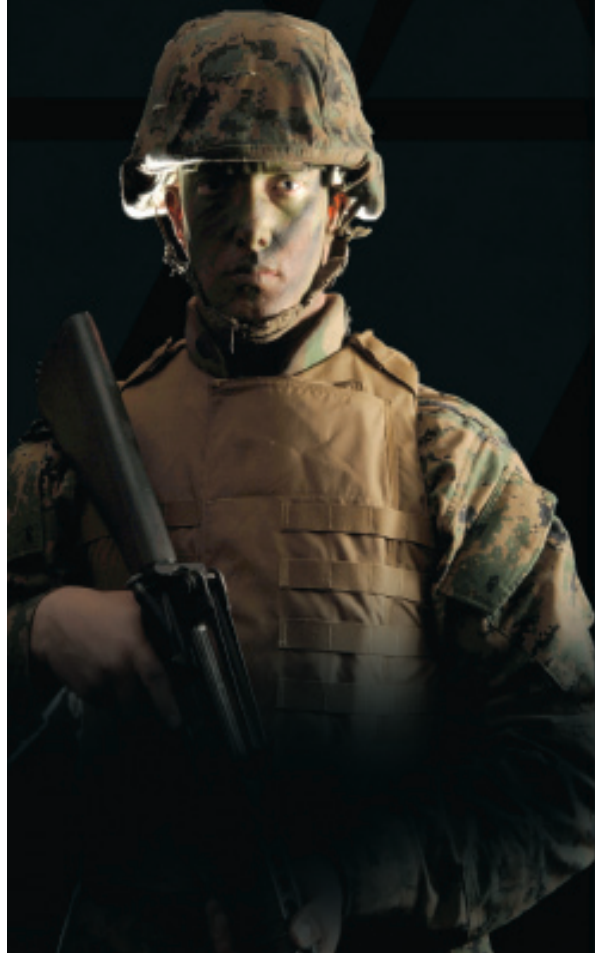


The
Marine Corps Martial Arts Program
EXERCISE BOOK



Combat Conditioning



The
Marine Corps Martial Arts Program

Exercise Book

*Produced by Combat Camera
Marine Corps Combat Service Support Schools
Camp Johnson
8 August, 2008*

THE WARRIORS CREED

**Wherever I walk, everyone is a
little safer.**

**Wherever I am, anyone in need
has a friend.**

**When I return home, everyone
is happy I am there.**

Robert L. Thompson (1928-1997) Army Special Forces

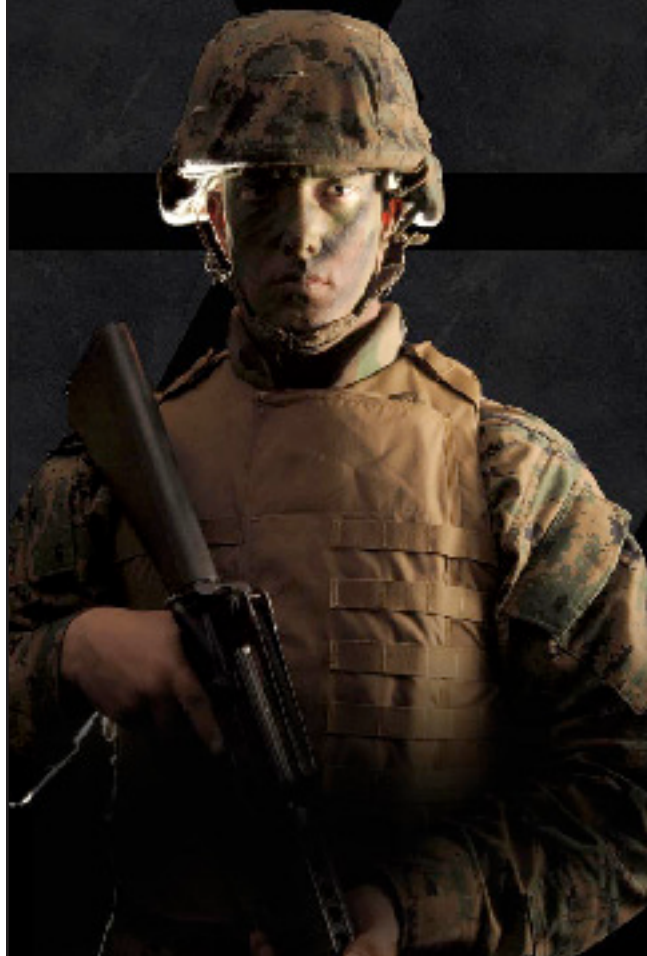


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PREFACE

(1) The Marine Corps exists to fight our nation's battles and make Marines. This means that everything we do as Marines is centered on our preparation for combat. For these reasons, the Marine is the ultimate warrior who must be prepared for uncertainty. Unlike the professional athlete, a Marine cannot afford to "peak;" rather, a Marine must maintain the optimal fitness level at all times. A Marine's training must combine strength, power, speed, and agility, in order to enhance martial skills that can be applied at the optimal moment in a combat environment.

(2) Additionally, knowing that combat has no quarters, halftime, or time-outs, a Marine must combine aerobic and anaerobic fitness to create strength, power, and endurance for the battlefield. The combination of flexibility and agility assists in the development of combat coordination skills designed to enhance a Marine's survival in an unpredictable and rapidly changing combat environment. Physical fitness, along with mental discipline and confidence, will ensure the Marine is capable of overcoming any obstacle or foe.

(3) The understanding that combat is the most physically and mentally demanding activity a human can experience motivates leaders to ensure that the physical development of all Marines is based upon combat-oriented conditioning, rather than general physical training, such as running, push-ups, and pull-ups. A key element of the Marine Corps Martial Arts Program (MCMAP) physical discipline is combat conditioning; a program that extends beyond the typical Marine Corps physical fitness regimen. Combat conditioning combines the physical fitness dividends of martial arts training with those of traditional physical fitness, water survival, and rough terrain skills training. It is designed to mitigate those factors experienced during combat that have a physically debilitating



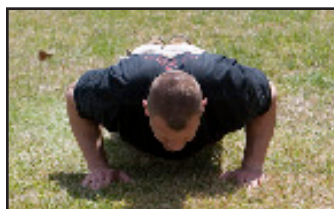
effect on the human body, allowing a Marine to fight in any terrain and under any climatic condition, in order to face the rigors of the dispersed battlefield encountered in modern combat. Combat conditioning consists of various components of fitness, as well as the programs that are part of the Marine Corps Martial Arts Combat Conditioning Program.

J. C. SHUSKO
Director, MACE

PROGRAMMING WORKOUTS

Cross-training the body's energy systems is the best way to achieve fitness for the unknown rigors of combat. Each routine must be different so the body cannot adapt to one particular situation. The more varied the routine, the better the work out. By changing routines and cross-training energy pathways, the body must adapt quickly and recover faster. This equates to higher fitness levels among Marines, which is the overall goal.

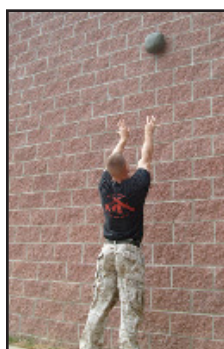
For starters, there are four movements of stationary exercise:



PUSH – Examples include; push-ups, bench press, chest press, etc.



PULL – Examples include; pull-up, row, rope climb, dead lift, etc.



OH LIFT – Examples include; wall ball, push press, press , etc.

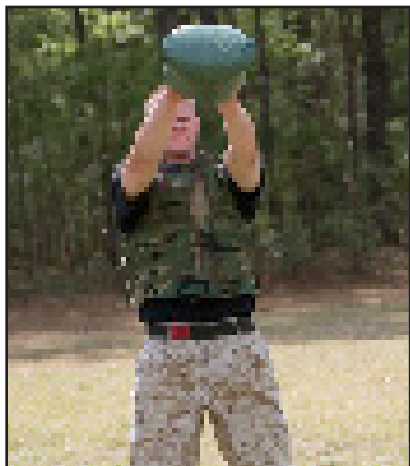
SQUAT – Examples include; buddy, lunge, back, front , etc.



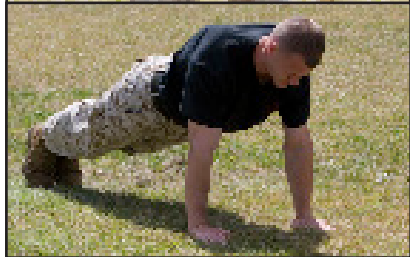
When programming your exercise routines, ensure you alternate pulling/pushing/squatting and overhead exercise; perform functional (multi-joint) movements found in the exercise manual; and exercise explosive and mobile movements.

PROGRAMMING WORKOUTS

In addition to the four movements of stationary exercises there are three categories of exercise:



(W) WEIGHTED: Examples include; buddy squats, sand bag swing, and fireman's carry.



(BW) BODY WEIGHT: Examples include; push-ups, pull-ups, and burpees.



(A) AEROBIC: Examples include; running, swimming, rowing, and hiking.

Combine the three categories of exercises together to form a week-long exercise schedule. For example, a workout based on a week schedule could be:

PROGRAMMING WORKOUTS

Monday: (W) Warm-up/Event/Flexibility (WEF)

3 Rounds for time: Sand Bag Swing x 30, Buddy Squats x 10,
Buddy Deadlifts x 10

Tuesday: (BW, W) (WEF)

5 Rounds for time: Buddy Push-ups x 30, Body Squats x 30

Wednesday: (A, W, BW) (WEF)

3 Rounds for time: Run 800 meters, Fireman Carry 100 meters,
Burpees x 20

Thursday: (BW, W) (WEF)

Complete as many rounds in 10 minutes as possible: Body Squat x
30, Sand Bag Push Press x 30

Friday: (A) (WEF)

Run 3 miles for time

In a nut shell, take any 3-4 exercises from the manual, develop a repetition scheme, and execute. Keep the training sessions short and intense.

Remember when programming your routines to exercise safely; exercise at the level of the individual Marine's ability; properly warm-up and cool-down; and stretch after exercise.

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CORE SPECIFIC STRENGTH TRAINING

Chapter 1

Core strength development is crucial for fitness in the combative arena. Marines often train the abdominal region but not the lower back. This leads to lack of balance in this region, which tends to lead to injuries. These exercises were developed to ensure balance and increase core strength. All core strength development exercises will be done as a static (non-moving) or at a slow cadence count with a pause at the top of the exercise using the commands of up and down.



CORE SPECIFIC STRENGTH TRAINING

1. Front Leaning Rest

EXECUTION: The Marine will begin by lying in a prone position. The “V” between the thumb and the forefinger will be in line with the shoulder (see figure 1). On order, the Marine will push to the top of the push up position and hold. At this time the Marine will suck the stomach in and keep the back straight. The hips will remain up and in alignment with the shoulders; the head will be in a neutral position (see figure 2). The exercise will be held for a specified time.

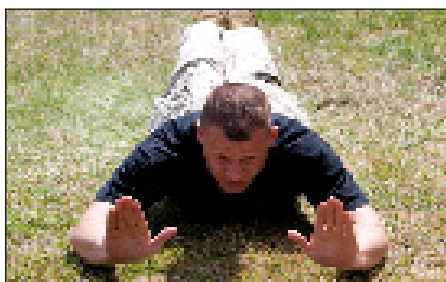


figure 1

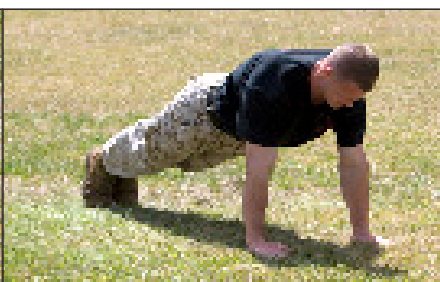


figure 2

2. Front Plank

EXECUTION: This position can begin from any of the side plank or front leaning rest positions. The Marine will begin on the elbows while keeping the upper arm perpendicular to the torso creating a 90 degree angle (see figure 1). Once in this position the Marine will suck the stomach in and keep the back straight. The hips will remain up and in alignment with the shoulders; the head will be in a neutral position (see figure 2). The exercise will be held for a specified time.

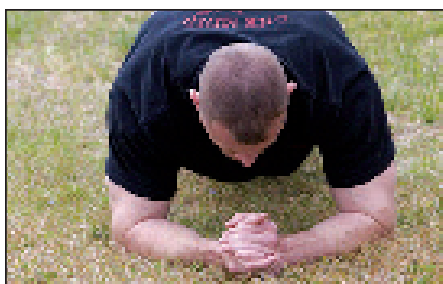
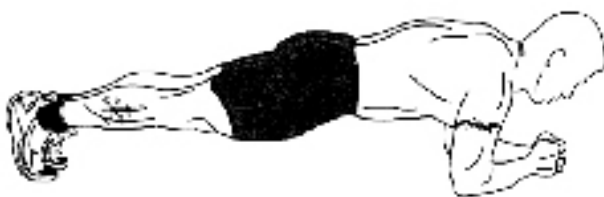


figure 1



figure 2

3. Side Plank

EXECUTION: There are two positions of the side plank: left and right. This position may begin from the front plank or the front leaning rest position. The Marine will turn on one side while making only two points of contact with the deck: the forearm and foot. The upper arm will remain perpendicular with the ground (see figure 1). The head will remain neutral while the hips will be up away from the deck, forward, and in alignment with the shoulders. The shoulders will be rolled back and the position will resemble that of a modified position of attention (see figure 2). The exercise will be held for a specified time.

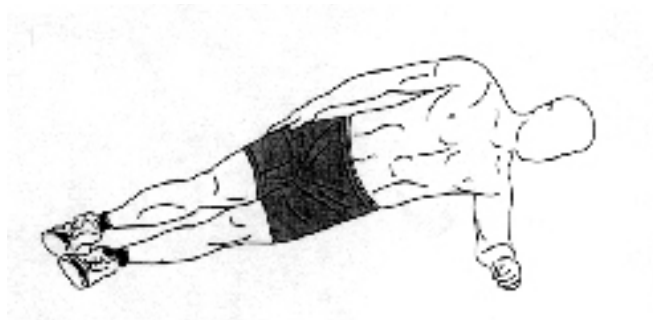


figure 1

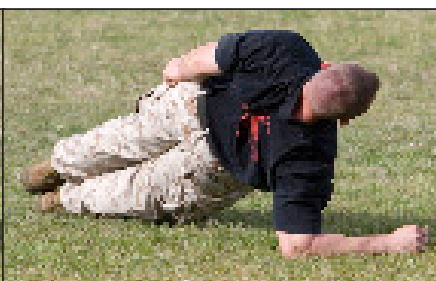


figure 2

4. Back Bridge

EXECUTION: The Marine will begin in the front leaning rest or front plank (see figure 1). The Marine will shoot one arm underneath the opposite armpit and turn to his or her back (see figure 2). The hips will be raised while the Marine maintains three points of contact with the deck: each foot and the upper back (see figure 3). This exercise will be held for a specified time.

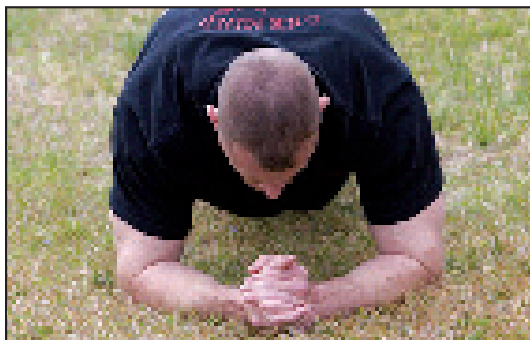


figure 1



figure 2



figure 3

5. Back Bridge with Leg Extension

EXECUTION: The Marine will begin in the back bridge position (see figure 1). The Marine will extend either leg to a 45 degree angle and point the toe upward (see figure 2). The Marine will continue to bridge the hips upward ensuring that the thighs are parallel but not touching (see figure 3). Each leg should be held for a specified time.

figure 1

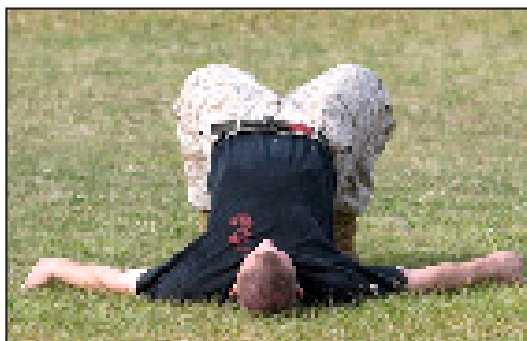


figure 2



figure 3



6. Abdominal Crunch

EXECUTION: The Marine will begin by lying on the deck with hands behind or to the side of the head. Fingers will not be interlocked and the elbows will remain pointing outboard. At no time during the exercise will the Marine pull up on the head. The knees will be bent and feet shall remain in contact with the deck at all times (see figure 1). On order, the Marine will suck the stomach in and force the lower back into the deck. The Marine will use the abdominal muscles to raise the shoulders off the deck (see figure 2). On order, the Marine will lower the torso back to the starting position.



figure 1

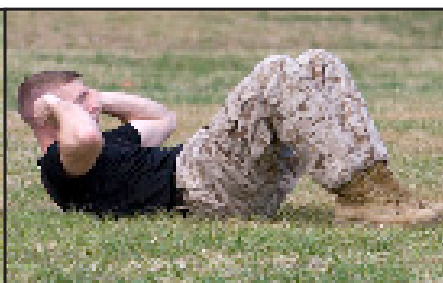


figure 2

7. Legs 90 Degree Abdominal Crunch

EXECUTION: The Marine will begin by lying on the deck with hands behind or to the side of the head. Fingers will not be inter-locked and the elbows will remain pointing outboard. At no time during the exercise will the Marine pull up on the head. The thighs will be elevated and knees bent at 90 degrees at all times (see figure 1). On order, the Marine will suck the stomach in and force the lower back into the deck. The Marine will use the abdominal muscles to raise the shoulders off the deck (see figure 2). On order, the Marine will lower the torso back to the starting position.

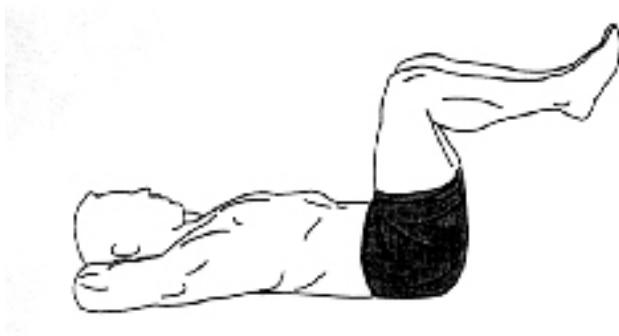


figure 1



figure 2

CORE SPECIFIC STRENGTH TRAINING

8. Free Foot Sit-Ups (sit & reach)

EXECUTION: The Marine will begin by lying on the deck with arms straight and extended perpendicular to the torso. The Marine will keep the knees bent and feet in contact with the deck at all times (see figure 1). On order, the Marine will suck the stomach in and force the lower back into the deck. The Marine will use the abdominal muscles to raise the torso off the deck and into the seated position. The arms will remain perpendicular to the deck throughout the entire exercise (see figure 2). On order, the Marine will lower the torso back to the starting position.

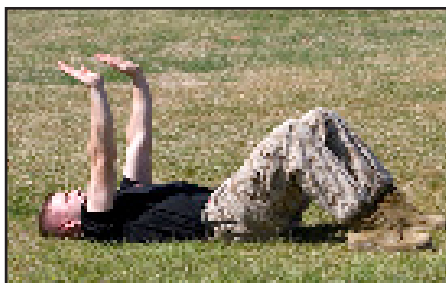
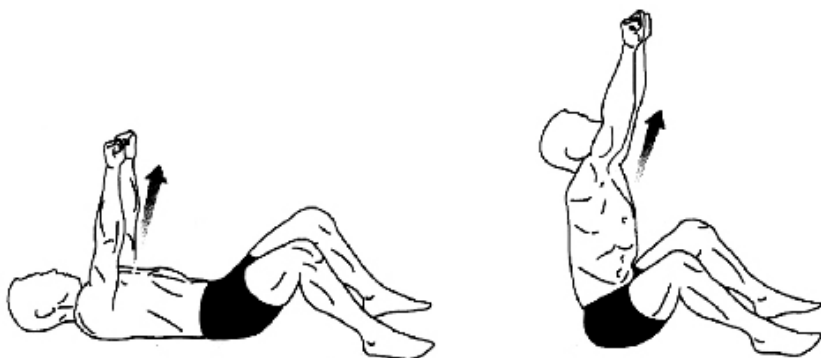


figure 1



figure 2

9. Reverse Crunch

EXECUTION: The Marine will begin by lying on the deck with hands behind or to the side of the head. Fingers will not be interlocked and the elbows will remain pointing outboard. At no time during the exercise will the Marine pull up on the head. The thighs will be elevated and the knees bent at 90 degrees at all times (see figure 1). On order, the Marine will suck the stomach in and raise the hips off the deck. The Marine will use the abdominal muscles to raise the hips off the deck (see figure 2). On order, the Marine will lower the hips back to the starting position.

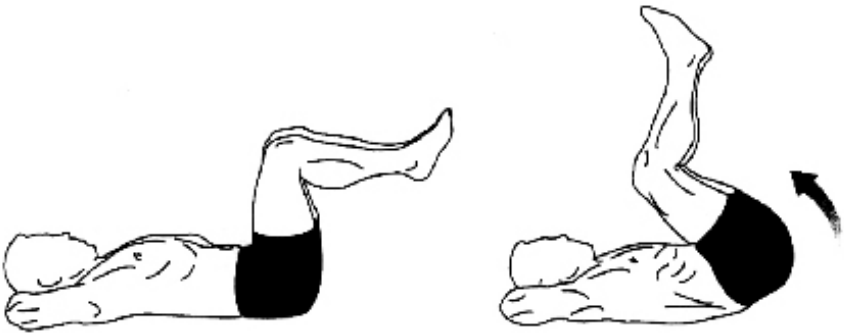


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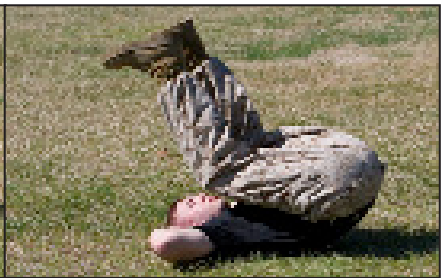


figure 2

10. Combination Crunch

EXECUTION: The Marine will begin by lying on the deck with hands behind or to the side of the head. Fingers will not be interlocked and the elbows will remain pointing outboard. At no time during the exercise will the Marine pull up on the head. The thighs will be elevated and the knees bent at 90 degrees at all times (see figure 1). On order, the Marine will suck the stomach in and force the lower back into the deck. The Marine will use the abdominal muscles to raise the shoulders and hips off the deck until neither the shoulder blades nor lower back are in contact with the deck (see figure 2). On order, the Marine will lower the torso and hips to the starting position.

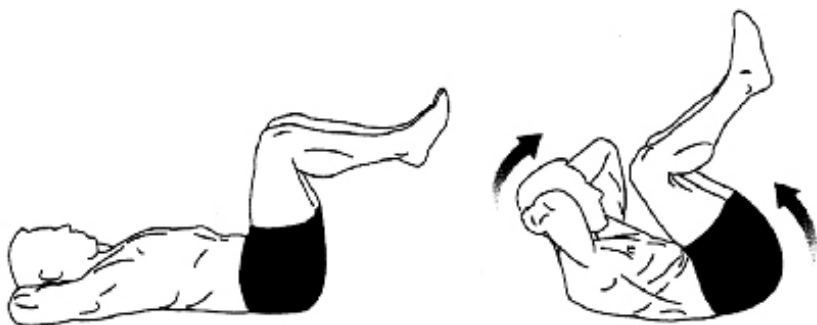


figure 1



figure 2

CORE SPECIFIC STRENGTH TRAINING

11. 45-90 Degree Leg Raises

EXECUTION: The Marine will begin by lying on the deck with hands behind or to the side of the head. Fingers will not be interlocked and the elbows will remain pointing outboard while the legs are straight and elevated at 90 degrees (see figure 1). The Marine will keep the legs elevated and straight at all times. On order, the Marine will suck the stomach in and force the lower back into the deck. The Marine will use the abdominal muscles to lower the legs to 45 degrees (see figure 2). The lower back will be pressed to the deck throughout the entire exercise. On order, the Marine will use the abdominals to raise the legs back to the 90 degree angle.

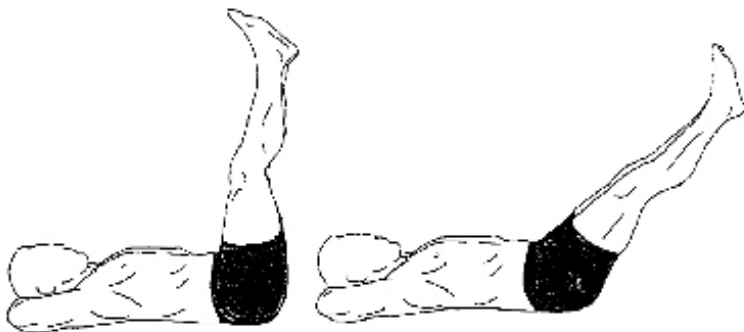


figure 1



figure 2

12. Bicycle

EXECUTION: The Marine will begin by lying on the deck with hands behind or to the side of the head. Fingers will be interlocked and the elbows will remain pointing outboard while the legs are straight and elevated at approximately 45 degrees. At no time will the head be pulled during the exercise. The exercise will be executed to a four-count cadence. On the command one, the Marine will bring the left knee in toward the shoulders while raising the right elbow and shoulder blade off the deck toward the knee (see figure 1). On two, the Marine will return to the starting position. On the command three, the Marine will bring the right knee in toward the shoulders while raising the left elbow and shoulder blade off the deck toward the knee (see figure 2). On four, the Marine will return to the starting position.



figure 1



figure 2

13. Slide Side Reach

EXECUTION: The Marine will begin by lying on the deck with hands off the deck and to the side of his body at a 45 degree angle. The Marine will keep the knees bent and feet in contact with the deck at all times. The exercise will be executed to a four-count cadence. On the command one, the Marine will crunch to the left side, forcing the left hand through the opening between the hamstring and calf (see figure 1). On two, the Marine will return to the starting position. On the command three, the Marine will crunch to the right side, forcing the right hand through the opening between the hamstring and calf (see figure 2). On four, the Marine will return to the starting position.

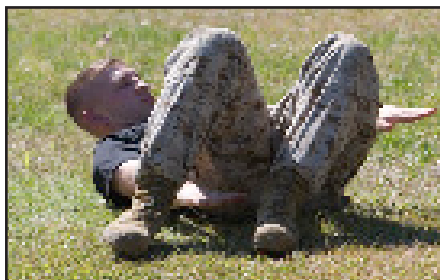
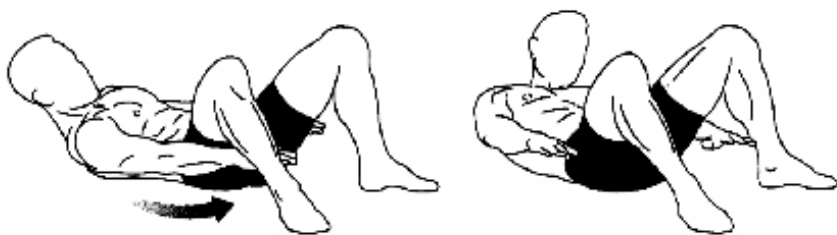


figure 1

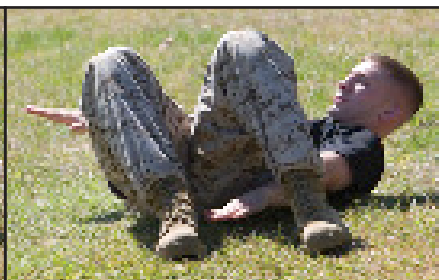


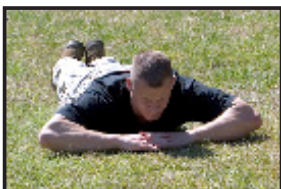
figure 2

Hyper Extensions Start Positions

EXECUTION: The Marine will lie on his stomach in the beginner (arms to the side), intermediate (hands overlapped under the chin) or advanced (arms extended over head and parallel to the deck) positions.



Beginner



Intermediate



Advanced

14. Hyper Extensions

EXECUTION: The Marine will begin by lying on the stomach in the beginner (arms to the side), intermediate (hands overlapped under the chin), or advanced (arms extended past the head and parallel to the deck) position (see figure 1). On order, the Marine will raise the torso while keeping the toes on the deck (see figure 2). On order, the Marine will lower, not drop, the torso to the starting position.



figure 1



figure 2

15. Reverse Hyper Extensions

EXECUTION: The Marine will begin by lying on the stomach with the hands overlapped and under the chin (see figure 1). On order, the Marine will raise the feet and thighs off the deck while keeping the legs straight (see figure 2). On the down command the Marine will lower, not drop, the legs to the deck.



figure 1



figure 2

16. Combination Hyper Extensions

EXECUTION: The Marine will lie on his stomach in the beginner (arms to the side), intermediate (hands overlapped under the chin), or advanced (arms extended past the head and parallel to the deck) position (see figure 1). On order, the Marine will raise the torso and thighs, while simultaneously lifting the legs straight and off the deck (see figure 2). On order, the Marine will lower, not drop, the torso and thighs to the starting position.



Beginner



Intermediate



Advanced



figure 1



figure 2

17. Swimmer Hyper Extensions

EXECUTION: The Marine will begin by lying on the stomach with the arms extended past the head and parallel to the deck. The exercise will be executed to a four-count cadence. On the command one, the Marine will raise his left arm and the right leg (see figure 1). On two, the Marine will lower, not drop, the arm and leg to the starting position. On the command three, the Marine will raise the right arm and left leg (see figure 2). On four, the Marine will lower, not drop, the arm and leg to the starting position.

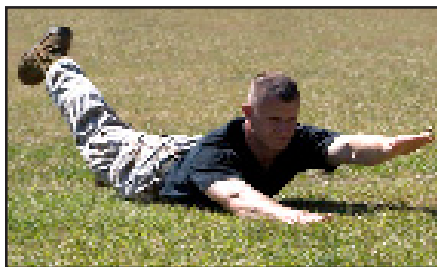
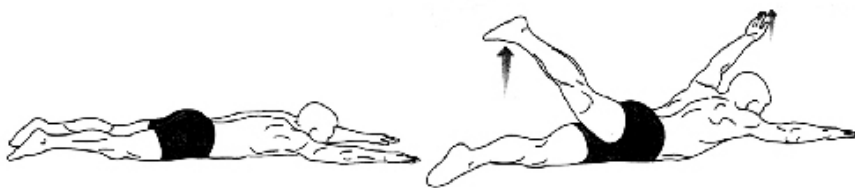


figure 1



figure 2

18. Hyper Extension Twist

EXECUTION: The Marine will begin by lying on the stomach with the arms bent and hands overlapped under the chin. The exercise will be executed to a four-count cadence. On the command one, the Marine will raise the right elbow up and to the rear toward the left hip (see figure 1). On two, the Marine will return to the starting position. On the command three, the Marine will raise the left elbow up and to the rear toward the right hip (see figure 2). On four, the Marine will return to the starting position. The feet will remain on the deck throughout the exercise.

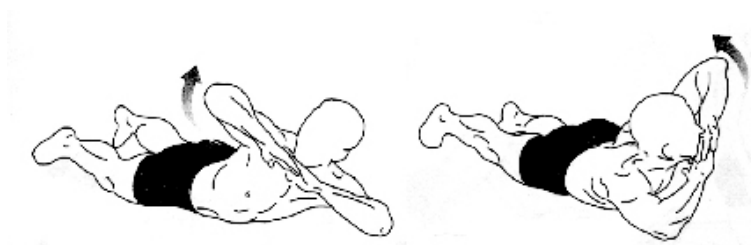


figure 1

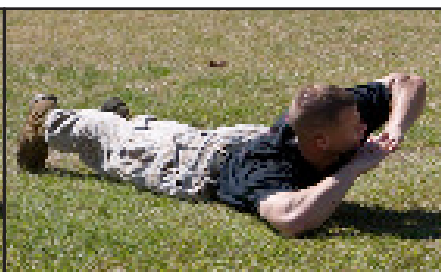


figure 2



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(BW) BODY WEIGHT EXERCISES

Chapter 2

The exercises included in this chapter are designed to increase the Marines level of combative fitness using only the Marines body weight, as well as providing skill transfer for martial arts techniques and regular battlefield oriented tasks. Marines are not limited to these calisthenics but must apply all the fundamentals to all exercises.



BODY WEIGHT EXERCISES

1. Push-Ups

EXECUTION: The Marine will begin by lying on the stomach with the hands shoulder width apart. The “V” between the thumb and forefinger will be in line with the shoulder. The elbows will not point away from the torso more than 45 degrees. Throughout the entire exercise the Marine will keep the stomach sucked in and the back flat. The hips should be in line with the shoulders. The exercise can be executed to the commands up and down or four-count cadence. On order, the Marine will press to the up position and hold (see figure 1). At this time the Marine will suck the stomach in and keep the back straight. The arms will be straight and elbows locked out; the hips will remain up and in alignment with the shoulders; the head will be in a neutral position. On order, the Marine will lower the torso and lower body to the deck, maintaining the previously described alignment (see figure 2). To ensure proper form, the exercise should not be executed at a high tempo.

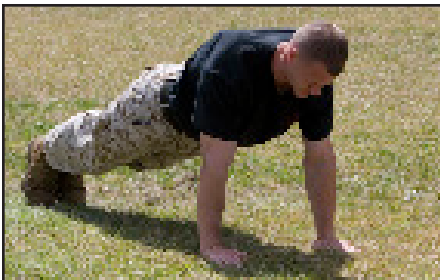
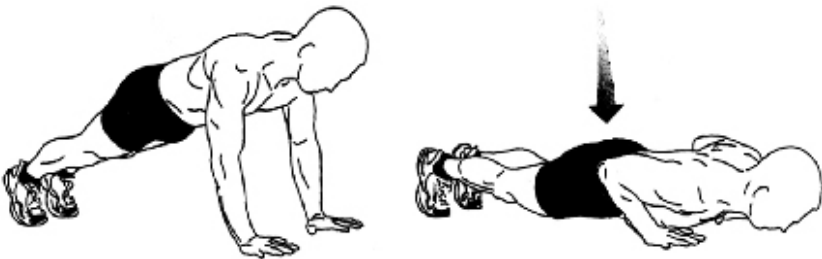


figure 1

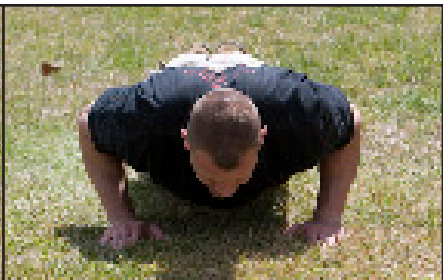


figure 2

BODY WEIGHT EXERCISES

2. Power-Ups

EXECUTION: The Marine will begin in the kneeling position with the stomach sucked in and the back flat. Forearms will be parallel with the deck; the hands will be placed approximately shoulder-width apart and the “V” between the thumb and forefinger will be slightly below and in line with the shoulder (see figure 1). On order, the Marine will extend the arms and fall forward to the deck. The stomach will remain sucked in and the back flat throughout the entire exercise. Upon contact with the ground, the elbows will not point away from the torso more than 45 degrees (see figure 2). On order, the Marine will rapidly extend the arms, explosively pushing away from the deck and returning to the kneeling position (see figure 3). To ensure proper form, the exercise should not be executed at a high tempo.

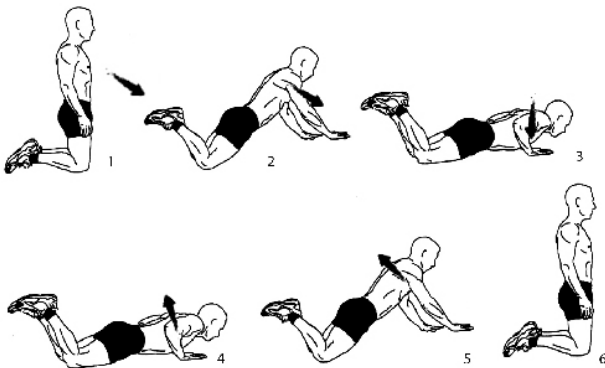


figure 1



figure 2



figure 3

3. Body Squat



figure 1

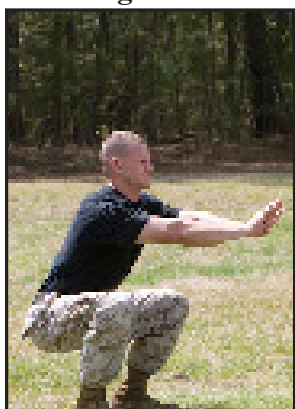


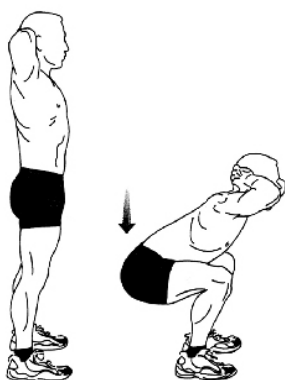
figure 2



figure 3

EXECUTION: The Marine will begin in the standing position with the feet shoulder width apart. The stomach will be sucked in and the back flat. Hand placement may be behind or to the side of the head. Fingers will not be interlocked and the elbows will remain pointing outboard. Alternatively, the arms may be held outstretched from the body, parallel with the deck. The head will be erect at all times (see figure 1). On order, the Marine will bend at the knees, keeping the stomach sucked in and the back flat. The knees will not move forward past the toes. Although the optimal bend in the knee will result in slightly less than a 90 degree angle, individual flexibility will determine the Marine's ability to perform a deep squat. The lumbar curve of the lower back will be maintained throughout the course of the exercise; weight will be distributed through the heels, while the chest and posterior are pushed out (see figure 2). On order, the Marine will return to the starting position

by extending the hips and straightening the legs (see figure 3). To ensure proper form, the exercise should not be executed at a high tempo.



BODY WEIGHT EXERCISES

4. Lunges

EXECUTION: The Marine will begin in the standing position with the feet shoulder width apart. The stomach will be sucked in and the back flat. Hand placement may be behind or to the side of the head. Fingers will not be interlocked and the elbows will remain pointing outboard. Alternatively, the hands may be placed on the hips. The head will be erect at all times (see figure 1). The exercise will be executed to a four-count cadence. On the command one, the Marine will step forward. The heel of the foot will make contact with the deck first, followed by the rest of the foot. The step should be wide enough to keep the knee from moving forward of the toes. The rear foot will provide balance during the exercise. On two, the Marine will lower the hips until the rear knee almost makes contact with the deck. Both the lead and rear legs will be bent to approximately 90 degrees (see figure 2). On the command three, the Marine will rise up and begin to push off with the lead foot. The heel will be the last portion of the lead foot to break contact with the deck. On four, the Marine will have returned to the starting position (see figure 3). The Marine will then alternate legs and repeat the exercise as prescribed above. To ensure proper form, the exercise should not be executed at a high tempo.

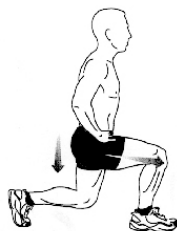


figure 1



figure 2

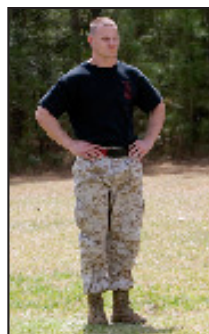


figure 3

5. Split Squats



figure 1

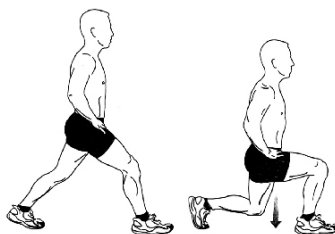


figure 2



figure 3

EXECUTION: The Marine will begin the exercise with one leg forward. The stomach will be sucked in and the back straight. Hand placement may be behind or to the side of the head. Fingers will not be interlocked and the elbows will remain pointing outboard. Alternatively, the hands may be placed on the hips. The head will be erect at all times (see figure 1). This exercise may be executed to the commands down and up or as a four-count cadence. On order, the Marine will lower the hips straight down. The shoulders and hips will travel on the same imaginary line throughout the entire movement, as if the torso was affixed to a pole. The rear leg will be the working leg and the lead leg will provide the balance throughout the exercise (see figure 2). On order, the Marine will rise up by extending the rear leg while keeping the stomach in and the back straight. The torso will continue to move as if it were affixed to a pole until the Marine returns to the starting position (see figure 3). The Marine will continue the exercise until the assigned repetitions are accomplished before switching legs.



BODY WEIGHT EXERCISES

6. Dive Bombers

EXECUTION: The Marine will begin in a modified push-up position with the hips raised higher than the chest and feet more than shoulder width apart (see figure 1). On order, the Marine will lower the chest to the deck in a parabolic motion (see figure 2) and extend upward until the arms are straight, the elbows locked out, and the chest is higher than the hips (see figure 3). On order, the Marine will reverse the motion (see figure 4) and return to the starting position (see figure 5). The exercise should resemble the Marine attempting to push him or herself under a fence, or similar obstacle, and returning to the side from which he or she began.



figure 1



figure 2



figure 3



figure 4



figure 5

7. Dips



figure 1



figure 2



figure 3

EXECUTION: The Marine will perform this exercise on a dip bar or between two stable surfaces of approximately the same height. The Marine will begin with the arms fully extended and the elbows locked out (see figure 1). On order, the Marine will slowly lower the body until the bend of the elbow is slightly less than 90 degrees, or where the shoulders are lower than the elbows (see figure 2). On order, the Marine will return to the starting position by extending the arms until the elbow has locked out (see figure 3).

BODY WEIGHT EXERCISES

8. Burpees

EXECUTION: The Marine will begin in a standing position (see figure 1). On order, the Marine will drop down into a squatting position, placing both hands flat on the deck approximately shoulder width apart (see figure 2). The Marine will shoot both legs backwards (see figure 3) and perform a push-up without resting on the deck (see figure 4). While maintaining hand placement on the deck, the Marine will bring the legs back to the squatting position (see figure 5) and perform a vertical leap for maximal height (see figure 6). This exercise most closely resembles an eight count bodybuilder executed at a much faster rate.



figure 1



figure 2



figure 3



figure 4



figure 5

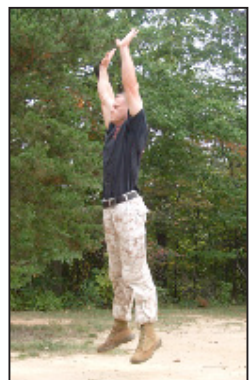


figure 6

9. L Pull-Ups



figure 1



figure 2



figure 3

EXECUTION: The Marine will begin by mounting a pull-up bar and arriving at a “dead hang.” The Marine may grip the pull-up bar with the palms facing either outboard or inboard. The Marine will raise the lower body until the legs have formed a 90 degree angle with the torso, or the body forms an “L” (see figure 1). On order, the Marine will execute a pull-up while maintaining the legs in the “L” position (see figure 2). On order, the Marine will lower him or herself back to the starting position (see figure 3).

10. Rope Climb

EXECUTION: The rope climb is a movement that all Marines should be able to perform. There are three primary means of climbing a rope; one involves mostly upper body strength, while the remaining two are significantly more energy efficient. The hand-over-hand method does not require the use of the legs or feet (see figure 1). The “wrap” method involves the rope being wrapped around one leg and over the foot while simultaneously being locked into place by constant pressure exerted by the opposite foot (see figure 2). The “J-hook” or “S” method involves the rope being threaded under one foot and overtop the opposite foot (see figure 3).



figure 1



figure 2



figure 3

BODY WEIGHT EXERCISES

11. Knees-to-Elbows

EXECUTION: The Marine will begin by mounting a pull-up bar and arriving at a “dead hang.” The Marine may grip the pull-up bar with the palms facing either outboard or inboard (see figure 1). On order, the Marine will raise the lower body until the knee cap and elbows are touching (see figure 2). On order, the Marine will slowly lower the legs, returning to the starting position (see figure 3).



figure 1



figure 2



figure 3

(W) BUDDY EXERCISES

Chapter 3

Combat conditioning buddy exercises are designed to increase teamwork as well as adding additional weight or resistance during exercises to increase the Marines muscular strength and endurance for battle field oriented tasks.



BUDDY EXERCISES

1. Vertical Sit-Ups

EXECUTION: To begin, Marines will be seated with one Marine securing the other's feet by grasping the left calf with the left hand and right calf with the right hand (see figure 1). At no time during the exercise will the Marine securing the legs use the forearms to simultaneously secure the left and right calves. Additionally, placing the hands or forearms above the calves or directly behind the knee is not authorized. The Marine whose feet and legs are secured will be executing the exercise. The Marine executing the exercise will lay on the deck with arms crossed over the chest or the hands behind or to the side of the head. Fingers will not be interlocked and the elbows will remain pointing outboard. The Marine will have knees bent and the stomach sucked in. On order, the Marine will press the lower back into the deck executing a sit-up (see figure 2). Once in the sit up position, the Marine will transition to the standing position (see figure 3). While standing, the Marine will push the hips forward while maintaining a straight back and erect head and shoulders. On order, the Marine will lower him or herself to the deck by first squatting down to the sit-up position and then lowering the torso back to the starting position. The Marine that is securing the feet and legs must maintain a secure hold throughout the exercise to provide balance and assistance.

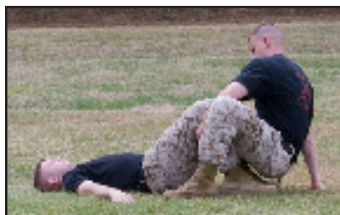


figure 1



figure 2



figure 3

BUDDY EXERCISES

2. Hanging Guard Sit-Ups

EXECUTION: To begin, the Marines will stand facing one another. One Marine will place the hands on the other's shoulders while that Marine grips the first Marine's belt and trousers. On order, the Marine whose belt and trousers have been secured will jump up and into the other Marine. The legs will be wrapped around the waist of the Marine gripping the belt and trousers and the ankles will be crossed. The Marine being held will place the hands behind or to the side of the head. Fingers will not be interlocked and the elbows will remain pointing outboard (see figure 1). On order, the suspended Marine will begin executing sit-ups starting in the down position (see figure 2). The stomach will remain sucked in and the upper body will be raised until it is perpendicular to the deck. On order, while maintaining constant tension in the abdominal muscles, the Marine will lower the torso, returning to the starting position (see figure 3).



figure 1

figure 2

figure 3

BUDDY EXERCISES

3. Buddy Sit-Ups

EXECUTION: To begin, one Marine will be positioned on the knees; the hands on the deck approximately shoulder width apart, arms straight and elbows locked out; and the back straight. The head will be hanging down with the chin pressed against the chest. The Marine executing the exercise will straddle the Marine on the deck, sitting on his or her shoulders. The hands will be behind or to the side of the head. Fingers will not be interlocked and the elbows will remain pointing outboard. The feet will be tucked inside the thighs of the Marine in the kneeling position (see figure 1). On order, the Marine sitting will execute a full range of motion sit-up while the bottom Marine supports the motion (see figure 2). On order, the Marine will return to the starting position (see figure 3).



figure 1



figure 2



figure 3

BUDDY EXERCISES

4. Buddy Leg Raises

EXECUTION: To begin, one Marine will lay on the deck with the legs straight and perpendicular to the deck. The other Marine will straddle the head and grasp the feet of the Marine on the deck. The Marine standing will have the feet approximately shoulder width apart; the Marine on the deck will grasp the ankles of the Marine standing (see figure 1). On order, the Marine standing will lightly push the legs toward the deck in the left, right, or center forward angles of movement. The Marine on the deck will keep the stomach sucked in and the lower back pressed into the deck. Once the Marines legs and feet are assisted downward, the Marine lying down will not allow them to touch the deck; but rather, will stop the legs and feet approximately six inches off the deck (see figure 2). The Marine will then return the legs and feet to the starting position by contracting the abdominal muscles (see figure 3). The Marine pushing the legs and feet toward the deck must be conscious of avoiding a predictable movement pattern. The Marine on the deck will be forced to work harder to stabilize the core if he or she is not cognizant of the direction in which the legs and feet are going to be pushed.



figure 1



figure 2

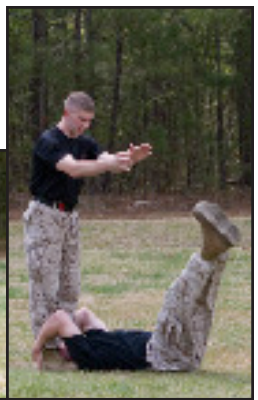


figure 3

5. Squad/Fireteam Push-Ups

EXECUTION: Marines will begin by lying on their stomachs with their hands shoulder width apart. The “V” between the thumb and forefinger will be in line with the shoulder. The elbows will not point away from the torso more than 45 degrees. Throughout the entire exercise, Marines will keep their stomachs sucked in and backs flat. Each Marine will place the shins and feet on the shoulders of the Marine behind him or her (see figure 1). On order, each Marine will push off the deck into a fully locked push-up position. At this time, Marines will suck the stomach in and keep their backs straight. The arms will be straight and elbows locked



figure 1



figure 2



figure 3

out; the hips will remain up and in alignment with the shoulders; the head will be in a neutral position (see figure 2). On order, all Marines will slowly lower themselves to the deck (see figure 3). Anyone incapable of coming to a fully locked-out push-up position should be moved to the head or rear of the squad; Marines capable of performing such push-ups with relative ease should be moved to the center of the squad. It is recommended that no more than 10 Marines execute the exercise as a squad.

6. Buddy Push-Ups

EXECUTION: To begin, one Marine will lie on the back with the hands shoulder width apart and forearms perpendicular to the deck. The “V” between the thumb and forefinger will be in line with the shoulder. The elbows will not point away from the torso more than 45 degrees. Another Marine will begin in a modified push-up position. The Marines will be laying chest-to-chest with heads pointing in opposite directions and thumbs interlocked (see figure 1). Throughout the entire exercise, both Marines will keep their stomachs sucked in and backs flat. On order, both Marines will press to full extension of the arms and the elbows will be locked. Both Marines will be pushing against each other at the same time (see figure 2). On order, both Marines will return to the starting position (see figure 3). As this exercise requires an elevated degree of stabilization, variations may be required to assist Marines in developing proper form. Variations include the top Marine remaining on his or her knees throughout execution or allowing only one Marine to press while the other remains static.

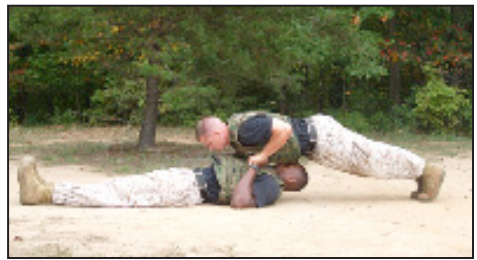


figure 1



figure 2

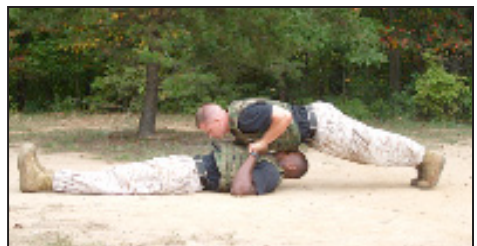


figure 3

7. Stacked Push-Ups

EXECUTION: To begin, one Marine will lie on the stomach with the hands shoulder width apart. The “V” between the thumb and forefinger will be in line with the shoulder. The elbows will not point away from the torso more than 45 degrees. Another Marine will begin in a modified push-up position behind the first Marine, straddling the Marine’s legs and placing the hands on the shoulder blades of the Marine on the deck (see figure 1). On order, both Marines will press to full extension of the arms and the elbows



figure 1



figure 2

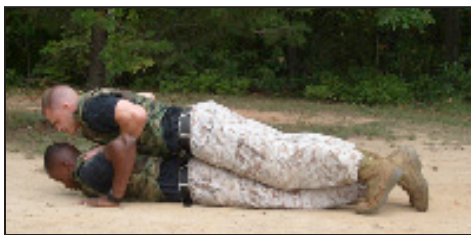


figure 3

will be locked (see figure 2). On order, both Marines will slowly return to the starting position (see figure 3). During this exercise, the bottom Marine will be working harder to push his or her bodyweight, as well as the other Marine’s bodyweight. Additionally, the bottom Marine must stabilize the weight while the top Marine pushes against the bottom Marine. As such, one variation consists of the bottom Marine executing the push-up while the top Marine remains static.

8. Side Mount Push-Ups

EXECUTION: To begin, one Marine will lie on the back with the hands shoulder width apart and forearms perpendicular to the deck. The “V” between the thumb and forefinger will be in line with the shoulder. The elbows will not point away from the torso more than 45 degrees. Another Marine will begin in a modified push-up position. The Marines will be laying chest-to-chest, almost perpendicular to one another (see figure 1). On order, the Marine on the bottom will execute a shoulder bridge by pushing off the deck with both feet and raising the hips. The bottom Marine will simultaneously press up with both arms, elevating the top Marine (see figure 2). The bottom Marine will then retract the arms and return to the starting position (see figure 3). The exercise is designed to be explosive, conducted for repetitions or time. The bottom Marine should work both the left and right sides to complete this exercise.



figure 1



figure 2



figure 3

9. Buddy Squats

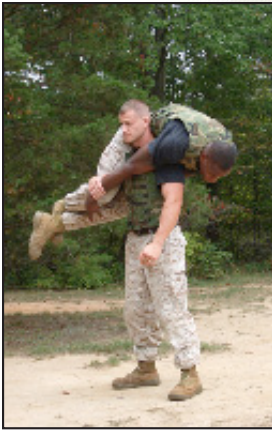


figure 1



figure 2



figure 3

EXECUTION: To begin, one Marine will begin in the fireman's carry position with the feet shoulder width apart. The stomach will be sucked in and the back flat. The Marine being carried will use the free hand to support the lumbar curve of the other Marine's lower back (see figure 1). On order, the Marine will bend at the knees, keeping the stomach sucked in and the back flat. The knees will not move forward past the toes. Although the optimal bend in the knee will result in slightly less than a 90 degree angle, individual flexibility will determine the Marine's ability to perform a deep squat. The lumbar curve of the lower back will be maintained throughout the course of the exercise; weight will be distributed through the heels, while the chest and posterior are pushed out (see figure 2). On order, the Marine will return to the starting position by extending the hips and straightening the legs (see figure 3). To ensure proper form, the exercise should not be executed at a high tempo.

10. Buddy Power-Ups

EXECUTION: To begin, one Marine will lay flat on the deck in a modified position of attention. The other Marine will approach the Marine on the deck from the direction of the head. In order to initiate the starting position, the Marine standing will execute a proper squat and position the hands under the shoulders or in the armpits of the Marine on the deck. On order, the Marine performing the power-up will deadlift the Marine on the deck (see figure 1) and position a leg behind the Marine (see figure 2). The Marine standing will rotate the hands until the fingers are oriented upward and continue to drive with the body (see figure 3). Once underneath, the Marine will continue to drive until both Marines are standing (see figure 4). On order, the Marine will slowly and safely lower the Marine to the deck in the reverse order (see figures 5 and 6).



figure 1



figure 2



figure 3

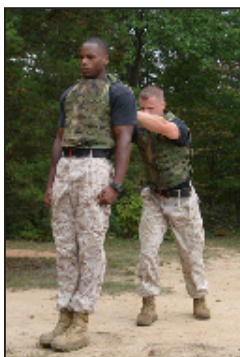


figure 4



figure 5



figure 6

BUDDY EXERCISES

11. Buddy Deadlift

EXECUTION: To begin, one Marine will lay flat on the deck in a modified position of attention. The other Marine will straddle the midsection of the Marine on the deck and grasp the belt and trousers of the Marine on the deck. The Marine standing will execute a proper squat in order to initiate the starting position (see figure 1). On order, the Marine standing will execute a deadlift by extending the legs and forcing the hips up and forward. The Marine standing shall not use the muscles of the upper body to lift the Marine from the deck; but rather, will use the leg and back muscles to raise the Marine from the deck. Throughout the execution of the exercise, the Marine on the deck must remain completely rigid, in the modified position of attention, and with the head forward and chin pressed into the chest (see figure 2). On order, the Marine standing will slowly and safely lower the other Marine to the deck (see figure 3).



figure 1

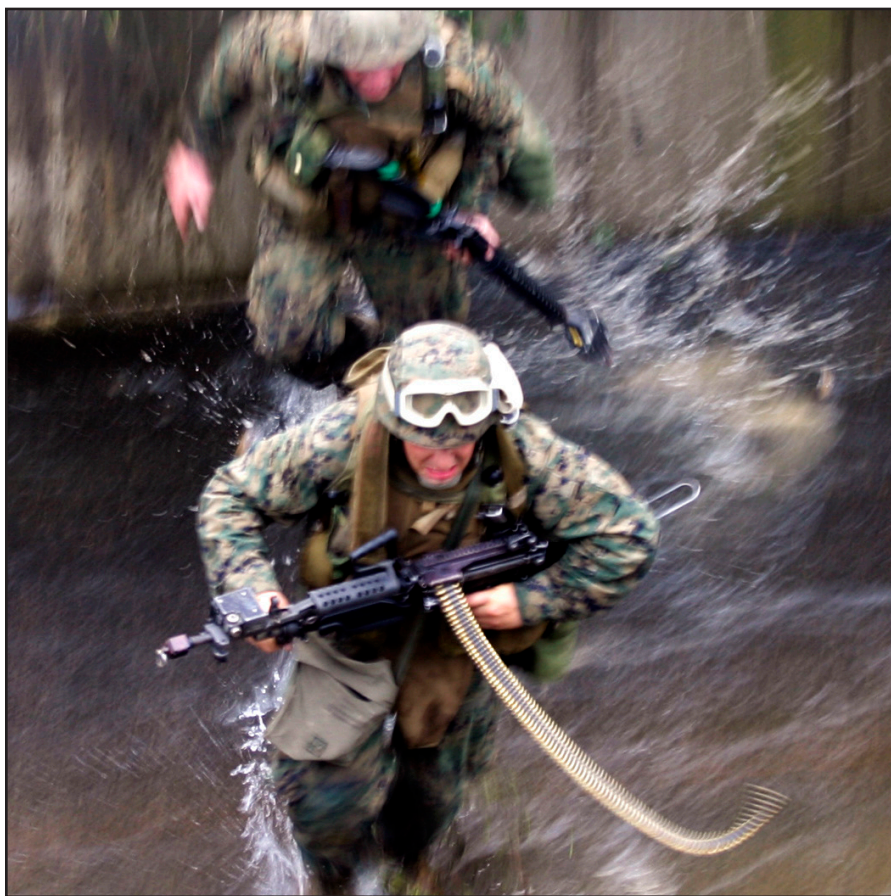
figure 2

figure 3

(W) MOVEMENT EXERCISES

Chapter 4

Combat conditioning movement exercises are designed for movement on the battlefield while under fire, moving to the objective, or moving a casualty to cover or an aid station. These movements can be executed individually or as a squad during Martial Arts Drills and Circuits. Marines are not limited to these movement techniques.



MOVEMENT EXERCISES

1. Pistol Belt Drag

EXECUTION: To begin, one Marine will be lying with the back on the deck. The other Marine will straddle the Marine on the deck and assume a bear crawl position (see bear crawl, page 52), such that the waistline is above the shoulders of the Marine on the deck. Once in this position, the Marine on the deck will reach up and tightly grasp the belt and trousers of the other Marine (see figure 1). On order, the Marine in the bear crawl position will begin to execute a bear crawl while dragging the Marine on the deck (see figure 2). The Marine performing the bear crawl will maintain four points of contact with the deck: the hands and feet. The Marine performing the bear crawl will not stand up until the exercise has been conducted for the designated distance. Additionally, at no time will the Marine on the deck assist the Marine executing the bear crawl.

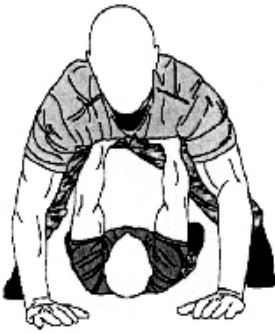


figure 1



figure 2

MOVEMENT EXERCISES

2. Firemans Carry

EXECUTION: This movement exercise will begin with both Marines in the standing position. The Marine performing the carry will stand perpendicular to the Marine being carried. The Marine will execute a squat (see squat, page 24) while reaching between the other Marine's legs with one arm and grasping the other Marine's wrist. The Marine being carried will lean forward until he lies across the other Marine's shoulders (see figure 1). The Marine performing the carry will transition control of the wrist to the hand that is between the legs of the Marine being carried. Once in this position, the Marine performing the carry will rise to the standing position (see figure 2). Throughout the entire execution, the Marine being carried will place the palm of the free hand in the small of the back of the Marine performing the carry. On order, the Marine will rapidly carry the other Marine the designated distance.

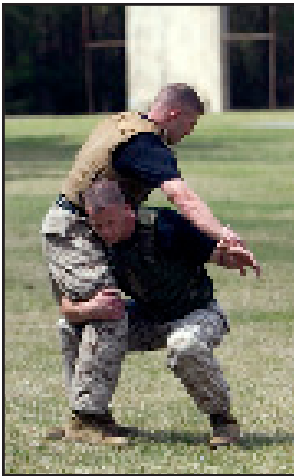


figure 1



figure 2



MOVEMENT EXERCISES

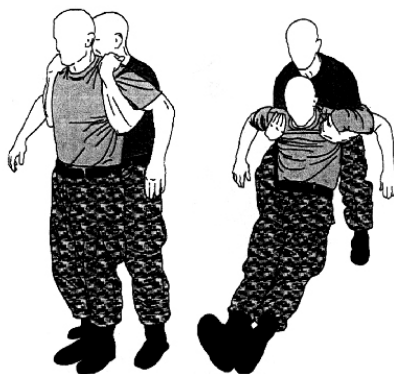
3. Under Arm Drag

EXECUTION: This movement exercise will begin with Marines covered-down and facing the opposite direction of movement. The Marine standing behind the other Marine and closest to the starting line will execute the carry. The Marine performing the carry will thrust the forearms under the other Marine's armpits, until the Marine's back is touching the chest of the Marine performing the carry. The armpits should be positioned in the bend of the elbow or on the biceps of the Marine performing the carry. Once in this position, the Marine executing the drag will lock the hands without interlocking the fingers (see figure 1). On order, the Marine will begin to move backwards in the direction of movement. The Marine that is being dragged will begin to move closer to the deck. The Marine executing the drag must lower his hips in order to remain upright throughout the carry (see figure 2). The feet of the Marine being carried will be splayed such that the instep of the foot is facing upward. At no time will the Marine being carried dig the heels into the deck or place the soles of the feet on the deck. Additionally, at no time will the Marine being carried assist the Marine executing the drag.



figure 1

figure 2



MOVEMENT EXERCISES

4. Cross Body Carry

EXECUTION: This movement exercise will begin with both Marines in the standing position. The Marine performing the carry will stand perpendicular to the Marine being carried. The Marine performing the carry will wrap one arm over the near shoulder, around the head, and under the armpit of the Marine being carried (see figure 1). The Marine performing the carry will lean forward slightly, bending at the hips and maintaining a straight back and slightly bent knees. The Marine being carried will lie across the back of the Marine performing the carry. The Marine performing the carry will reach over legs of the Marine being carried and place the free arm around the other Marine's legs, grasping the leg closest to the deck. The Marine performing the carry will straighten up, lifting the other Marine off the deck, and adjust the Marine being carried such that he or she is parallel to the deck and positioned at or above the hips of the Marine performing the carry (see figures 2 and 3). On order, the Marine will rapidly carry the other Marine the designated distance.



figure 1

figure 2

figure 3

5. Buddy Drag

EXECUTION: This movement exercise will begin with Marines covered-down and facing the direction of movement. The Marine standing in front of the other Marine and closest to the starting line will execute the carry. The Marine being carried will thrust both arms over the shoulders of the Marine performing the carry. Once in this position, the Marine being carried will lock the hands without interlocking the fingers (see figure 1). The Marine performing the carry will ensure that his or her shoulders are seated in the armpits of the Marine being carried. The Marine performing the carry will grasp the wrists or forearms of the Marine being carried (see figure 2). At no time will the forearms of the Marine being carried contact the neck or throat of the Marine performing the carry. Additionally, the feet of the Marine being carried will remain in contact with the deck; however, at no time will the Marine being carried place the soles of the feet on the deck. Further, at no time will the Marine being carried assist the Marine executing the drag. On order, the Marine will rapidly carry the other Marine the designated distance (see figure 3).

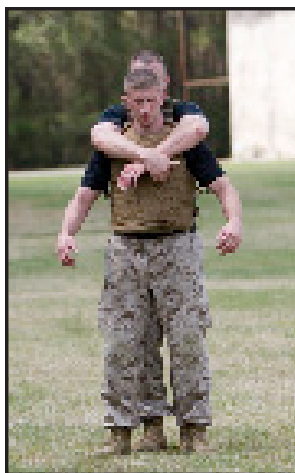


figure 1



figure 2



figure 3

MOVEMENT EXERCISES

6. Piggy Back

EXECUTION: This movement exercise will begin with Marines covered-down and facing the direction of movement. The Marine standing in front of the other Marine and closest to the starting line will execute the carry. The Marine being carried will place the hands on the shoulders of the Marine performing the carry. The Marine performing the carry will lean forward slightly, bending at the hips and maintaining a straight back and slightly bent knees. The Marine being carried will jump onto the back of the Marine performing the carry and lock the hands, without interlocking the fingers, around the shoulders of the Marine performing the carry. The Marine performing the carry will reach over the legs of the Marine being carried and grasp the hamstrings or behind the knees (see figure 1). The Marine performing the carry will straighten up, lifting the other Marine, and adjust the Marine being carried such that he or she is perpendicular to the deck and positioned at or above the hips of the Marine performing the carry (see figure 2). At no time will the forearms of the Marine being carried contact the neck or throat of the Marine performing the carry. On order, the Marine will rapidly carry the other Marine the designated distance.



figure 1

figure 2



MOVEMENT EXERCISES

7. Bear Crawl

EXECUTION: The Marine will begin by maintaining four points of contact with the deck: the hands and feet. The Marine will face the deck and move forward by placing the right hand and left foot forward (see figure 1). Once both the hand and foot are on the ground, the Marine will move forward by placing the left hand and right foot forward (see figure 2). The Marine will continue in this manner until the prescribed distance has been reached. The Marine performing the bear crawl will not stand up until the exercise has been conducted for the designated distance. At no time will the knees make contact with the deck.



figure 1



figure 2

MOVEMENT EXERCISES

8. Crab Walk

EXECUTION: The Marine will begin by maintaining four points of contact with the deck: the hands and feet. The Marine will face away from the deck, maintain elevated hips, and support the body with only the hands and feet. The Marine will move forward by placing the left hand and right foot forward (see figures 1 and 2). Once both the hand and foot are on the ground, the Marine will move forward by placing the right hand and left foot forward. The Marine will continue in this manner until the prescribed distance has been reached. The Marine performing the crab walk will not stand up until the exercise has been conducted for the designated distance. At no time will the Marine rest on the heels or allow the hips to contact the deck. Exercise variations include performing the crab walk laterally, as well as in a linear fashion.

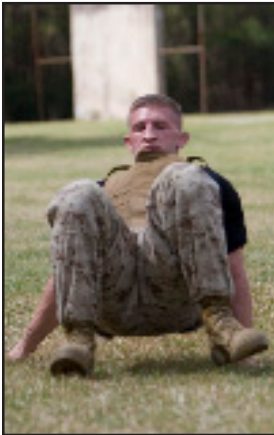


figure 1

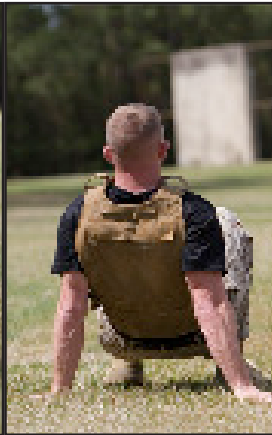


figure 2





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(W) STRENGTH TRAINING WITH FIELD EQUIPMENT

Chapter 5

Combat conditioning strength training incorporates ammo cans, water cans, and sand bags to develop strength and power through a full range of motion to assist in martial tasks while providing a foundation for martial and combative skills.



(W) AMMO AND WATER CAN EXERCISES

Ammo and water can exercises were developed to allow the individual Marine to use equipment other than that regularly associated within the gym environment. The use of austere equipment accentuates the importance of functional movements. Together, these movements improve core strength, develop strength and power, and increase range of motion.



1. Lunge

EXECUTION: The Marine will begin in the standing position with the feet shoulder width apart. The stomach will be sucked in and the back flat. The arms will be fully extended at the sides with the fingers and thumbs completely grasping the object. The head will be erect at all times. The exercise will be executed to a four-count cadence. On the command one, the Marine will step forward. The heel of the foot will make contact with the deck first, followed by the rest of the foot. The step should be wide enough to keep the knee from moving forward of the toes. The rear foot will provide balance during the exercise (see figure 1). On two, the Marine will lower the hips until the rear knee almost makes contact with the deck. Both the lead and rear legs will be bent at approximately 90 degree angles (see figure 2). On the command three, the Marine will rise up and begin to push off with the lead foot. The heel will be the last portion of the lead foot to break contact with the deck. On four, the Marine will have returned to the starting position (see figure 3). The Marine will then alternate legs and repeat the exercise as prescribed above. To ensure proper form, the exercise should not be executed at a high tempo.



figure 1



figure 2



figure 3

2. Straight Leg Dead Lift

EXECUTION: The Marine will stand upright with the feet 6 to 9 inches apart. The arms will be fully extended at the sides with the fingers and thumbs completely grasping the object (see figure 1). This exercise may be executed to the commands up and down or as a four-count cadence. On order, the Marine will position the objects in front of the body and bend forward, keeping the stomach sucked in tightly, the back flat, and the knees slightly bent (see figure 2). On order, the Marine will raise the torso, keeping the stomach tight and the back flat. The hips will be pushed forward and the Marine will return to the starting position (see figure 3).



figure 1



figure 2



figure 3

3. Split Squat

EXECUTION: The Marine will begin the exercise with one leg forward. The stomach will be sucked in and the back straight. The arms will be fully extended at the sides with the fingers and thumbs completely grasping the object. The head will be erect at all times (see figure 1). This exercise may be executed to the commands down and up or as a four-count cadence. On order, the Marine will lower the hips straight down. The shoulders and hips will travel on the same imaginary line throughout the entire movement, as if the torso was affixed to a pole. The rear leg will be the working leg and the lead leg will provide the balance throughout the exercise (see figure 2). On order, the Marine will rise up by extending the rear leg while keeping the stomach in and the back straight. The torso will continue to move as if it were affixed to a pole until the Marine returns to the starting position (see figure 3). The Marine will continue the exercise until the assigned repetitions are accomplished before switching legs.



figure 1

figure 2

figure 3

4. Squat

EXECUTION: The Marine will begin in the standing position with the feet shoulder width apart. The stomach will be sucked in and the back flat. The arms will be fully extended at the sides with the fingers and thumbs completely grasping the object. Alternatively, the arms may be positioned perpendicular to the deck, elbows bent and pointing outboard, forearms parallel to the deck, and hands grasping the object behind the head. The head will be erect at all times (see figures 1a and 2a). On order, the Marine will bend at the knees, keeping the stomach sucked in and the back flat. The knees will not move forward past the toes. Although the optimal bend in the knee will result in slightly less than a 90 degree angle, individual flexibility will determine the Marine's ability to perform a deep squat. The lumbar curve of the lower back will be maintained throughout the course of the exercise; weight will be distributed through the heels, while the chest and posterior are pushed out. Arm positioning will not change during the course of the exercise (see figures 1b and 2b). On order, the Marine will return to the starting position by extending the hips and straightening the legs. To ensure proper form, the exercise should not be executed at a high tempo.



figure 1a

figure 1b



figure 2a

figure 2b

(W) SAND BAG MEDICINE BALL EXERCISES

The sand bag medicine ball exercises were developed to allow the Marine to utilize the core strength, develop power, increase range of motion, and increase team work during combative movements and tasks. The weight of the sand bag should not exceed 10 lbs.



SAND BAG MEDICINE BALL EXERCISES

Stance

EXECUTION: The Marine will begin with the feet approximately shoulder width apart and knees slightly bent. The elbows will be positioned at the Marine's sides and the hands will be placed on both sides of the sand bag; the fingers will be spread. There will be a slight lean forward at the waist while the chest is forward, the back flat, and the stomach sucked in tightly. The head will remain in a neutral position.



Receive and Toss Hand Position

When receiving and after tossing the sand bag, the Marine's palms will be facing slightly outboard at an angle, fingers spread, and thumbs pointing down. The arms will be extended with a slight bend in the elbows.

The Marine will remain in the proper stance with the feet approximately shoulder width apart and knees slightly bent. There will be a slight lean forward at the waist while the

chest is forward, the back flat, and the stomach sucked in tightly.

The head will remain in a neutral position. When receiving the sand bag, the Marine must begin to decelerate the sand bag once it has made contact with the fingertips and hands. Proper deceleration is performed by catching the sand bag and bringing it into or behind the body, while simultaneously slowing the sand bag's momentum. The Marine must ensure that the elbows remain positioned close to the body at all times.



SAND BAG MEDICINE BALL EXERCISES

1. Russian

EXECUTION: The Marine will begin in the proper stance with the feet approximately shoulder width apart and knees slightly bent (see stance, page 62). The arms will be fully extended and the sand bag will be held in front of the body, at or below waist level (see figure 1). On order, the Marine will raise the sand bag overhead while maintaining fully extended arms and slight bends in the elbows. The Marine will ensure the back is flat and stomach sucked in tightly; the range of motion shall not cause the Marine to sway or break stance (see figure 2). On order, the Marine will lower, not drop, the sand bag to the starting position (see figure 3).

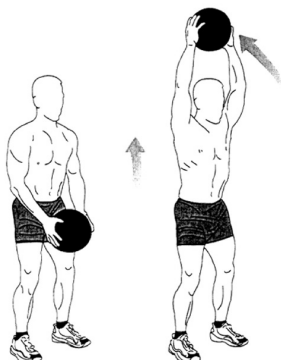


figure 1

figure 2

figure 3

2. Axe Chopper

EXECUTION: The Marine will begin in the proper stance with the feet approximately shoulder width apart and knees slightly bent (see stance, page 62). The arms will be fully extended and the sand bag will be held in front of the body, at or below waist level. On order, the Marine will raise the sand bag overhead while maintaining fully extended arms and slight bends in the elbows. The Marine will ensure the back is flat and stomach sucked in tightly; the range of motion shall not cause the Marine to sway or break stance (see figure 1). On order, the Marine will allow gravity to lower the sand bag to the starting position; the Marine will simultaneously squat. Once the sand bag has reached the lowest point of travel, it should be positioned between the legs with the Marine in a squat position (see figure 2). On order, the Marine will return to the starting position by extending the hips and straightening the legs.



figure 1

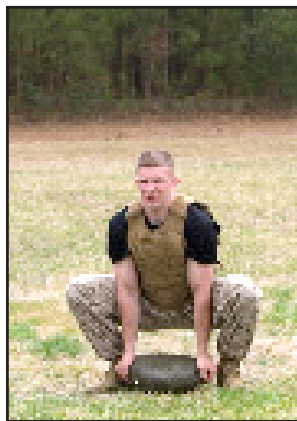
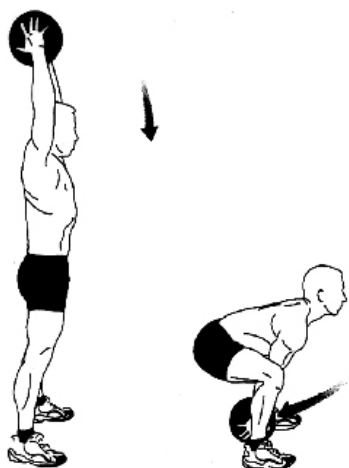


figure 2

3. Ball Slam

EXECUTION: The Marine will begin in the proper stance with the feet approximately shoulder width apart and knees slightly bent (see stance, page 62). The arms will be fully extended and the sand bag will be held in front of the body, at or below waist level. On order, the Marine will raise the sand bag overhead while maintaining fully extended arms and slight bends in the elbows. The Marine will ensure the back is flat and stomach sucked in tightly; the range of motion shall not cause the Marine to sway or break stance, although the Marine may rise to the toes (see figure 1). On order, the Marine will forcefully slam the sand bag into the deck while simultaneously squatting. Once the sand bag has reached the lowest point of travel, it should be positioned between the legs with the Marine in a squat position (see figure 2). The Marine will attempt to catch the sand bag on the bounce by scooping the hands underneath it (see figure 3). On order, the Marine will extend the hips, straighten the legs, and return the sand bag overhead in order to continue the exercise (see figure 4).



figure 1



figure 2

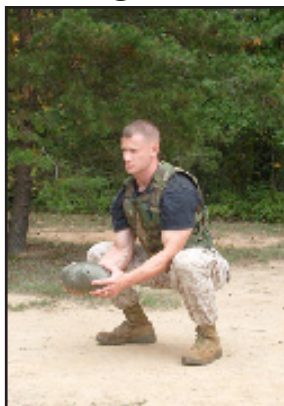


figure 3



figure 4

4. Wall Ball

EXECUTION: The Marine will begin in the proper stance with the feet approximately shoulder width apart and knees slightly bent (see stance, page 62). The arms will be bent and the sand bag will be held in front of the body, at or below chin level. The elbows will be bent and directly under the sand bag. On order, the Marine will bend at the knees, keeping the stomach sucked in and the back flat. The knees will not move forward past the toes. Although the optimal bend in the knee will result in slightly less than a 90 degree angle, individual flexibility will determine the Marine's ability to perform a deep squat. The lumbar curve of the lower back will be maintained throughout the course of the exercise; weight will be distributed through the heels, while the chest and posterior are pushed out. The Marine will maintain the sand bag in front of the body, at or below chin level (see figure 1). The Marine will forcefully explode upward, extending the hips and straightening the legs, while simultaneously tossing the sand bag against the wall to a height of approximately ten feet. The Marine will ensure that the arms are fully extended with slight bends in the elbows, the hands open, and fingers spread (see figure 2). The Marine will allow gravity to return the sand bag and will attempt to catch it using proper hand positioning and deceleration techniques (see receive and toss hand position, page 62). Once the sand bag has returned to the Marine's fingertips and hands, the arms will recoil to the bent position and the sand bag will be held in front of the body, at or below chin level. The elbows will be bent and directly under the sand bag. The Marine will bend at the knees, keeping the stomach sucked in and the back flat, and return to the proper squat position (see figure 3).

SAND BAG MEDICINE BALL EXERCISES

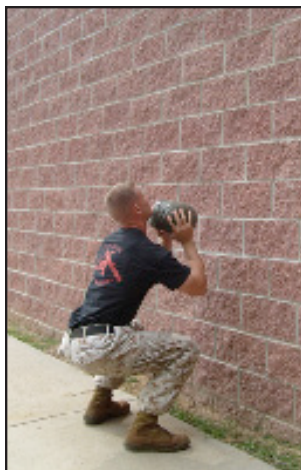


figure 1



figure 2



figure 3

5. Chest Press



figure 1

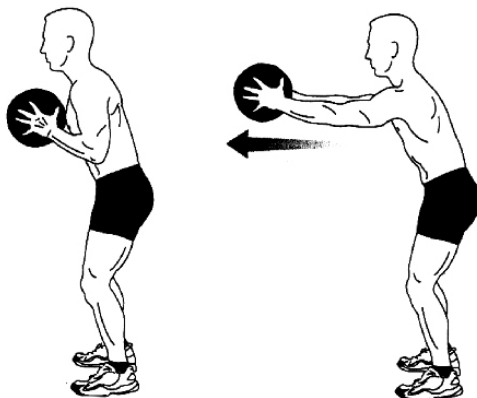


figure 2



figure 3

EXECUTION: The Marine will begin in the proper stance with the feet approximately shoulder width apart and knees slightly bent (see stance, page 62). The arms will be bent and the sand bag will be held in front of the body, at chest level. The elbows will remain positioned tightly against the body (see figure 1). On order, the Marine will extend the arms, pressing the sand bag to the front. The elbows will remain in and the sand bag will travel parallel to the deck at chest height. The Marine will ensure the back is flat and stomach sucked in tightly; the range of motion shall not cause the Marine to sway or break stance (see figure 2). After full extension, the Marine will rapidly retract the sand bag to the starting position (see figure 3). This exercise will be conducted as quickly as possible without sacrificing proper technique.



6. Over Head Toss

EXECUTION: Both Marines will begin facing one another in the proper stance with the feet approximately shoulder width apart and knees slightly bent (see stance, page 62). Both Marines will receive and toss the sand bag in the manner prescribed (see receive and toss hand position, page 62). One Marine will stand with the sand bag behind the head, and the elbows in line with the shoulders and pointing forward (see figure 1). The Marine will toss the sand bag by extending it overhead and releasing it toward the receiving Marine. The Marine tossing the sand bag will toss it in a straight line, aiming at the receiving Marine's hands. When releasing the sand bag, the Marine will do so by rotating the thumbs downward and remaining in this position awaiting the return of the sand bag (see figure 2). The Marine receiving the sand bag will absorb the momentum of the sand bag by decelerating it to the starting position behind the head (see figure 3). The receiving Marine will immediately toss the sand bag to the other Marine.



figure 1



figure 2



figure 3

7. Over Head Press



figure 1

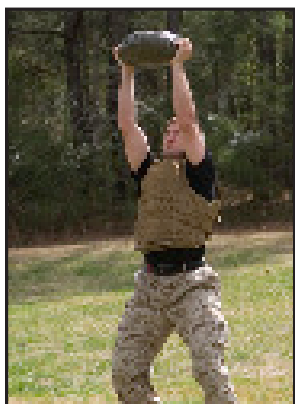
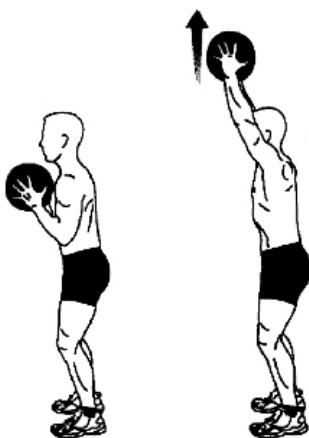


figure 2



figure 3

EXECUTION: The Marine will begin in the proper stance with the feet approximately shoulder width apart and knees slightly bent (see stance, page 62). The arms will be bent and the sand bag will be held in front of the body, at chest level. The elbows will remain positioned tightly against the body (see figure 1). On order, the Marine will extend the arms, pressing the sand bag upward. The elbows will remain in and the sand bag will travel perpendicular to the deck until full extension is reached. The Marine will ensure the back is flat and stomach sucked in tightly; the range of motion shall not cause the Marine to sway or break stance (see figure 2). After full extension, the Marine will rapidly retract the sand bag to the starting position (see figure 3). This exercise will be conducted as quickly as possible without sacrificing proper technique.



8. Lunge and Reach

EXECUTION: The Marine will begin in the standing position with the feet shoulder width apart. The stomach will be sucked in and the back flat. The arms will be bent and the sand bag will be held in front of the body, at chest level. The head will be erect at all times. The exercise will be executed to a four-count cadence. On the command one, the Marine will step forward. The heel of the foot will make contact with the deck first, followed by the rest of the foot. The step should be wide enough to keep the knee from moving forward of the toes. The rear foot will provide balance during the exercise (see figure 1). On two, the Marine will lower the hips until the rear knee almost makes contact with the deck. Both the lead and rear legs will be bent at approximately 90 degree angles. The Marine will fully extend the arms, pressing the sand bag to the front. The elbows will remain in line with the shoulders and the sand bag will travel parallel to the deck at chest height (see figure 2). On the command three, the Marine will rapidly retract the sand bag to the starting position, rise up, and begin to push off with the lead foot. The heel will be the last portion of the lead foot to break contact with the deck. On four, the Marine will have returned to the starting position. The Marine will then alternate legs and repeat the exercise as prescribed above (see figure 3). To ensure proper form, the exercise should not be executed at a high tempo.



figure 1

figure 2

figure 3

9. Over Head Lunge

EXECUTION: The Marine will begin in the standing position with the feet shoulder width apart. The stomach will be sucked in and the back flat. The head will be erect at all times. One arm will be fully extended overhead with the elbow locked. The sand bag will be grasped in the hand of the fully extended arm and maintained overhead throughout the duration of the exercise. The other arm may be used to maintain the Marine's balance (see figure 1). On order, the Marine will step forward. The heel of the foot will make contact with the deck first, followed by the rest of the foot. The step should be wide enough to keep the knee from moving forward of the toes. The rear foot will provide balance during the exercise. The Marine will lower the hips until the rear knee almost makes contact with the deck. Both the lead and rear legs will be bent at approximately 90 degree angles (see figure 2). On order, the Marine will rise and begin to push off with the lead foot. The heel will be the last portion of the lead foot to break contact with the deck (see figure 3). The Marine will then alternate legs and repeat the exercise as prescribed above. To ensure proper form, the exercise should not be executed at a high tempo.



figure 1

figure 2

figure 3

10. Chest Toss

EXECUTION: Both Marines will begin facing one another in the proper stance with the feet approximately shoulder width apart and knees slightly bent (see stance, page 62). Both Marines will receive and toss the sand bag in the manner prescribed (see receive and toss hand position, page 62). One Marine will stand with the sand bag held in front of the body at chest level. The elbows will remain positioned close to the body (see figure 1). The Marine will toss the sand bag by rapidly extending the arms and releasing the sand bag toward the receiving Marine. The Marine tossing the sand bag will toss it in a straight line, parallel with the deck, aiming at the receiving Marine's hands. When releasing the sand bag, the Marine will do so by rotating the thumbs downward and remaining in this position awaiting the return of the sand bag. The Marine receiving the sand bag will absorb the momentum of the sand bag by decelerating it to the starting position in front of the body (see figure 2). The receiving Marine will immediately toss the sand bag to the other Marine.



figure 1



figure 2

SAND BAG MEDICINE BALL EXERCISES

11. Single Arm Sand Bag Push-Up

EXECUTION: The Marine will begin in the front leaning rest position with the hands shoulder width apart. The sand bag will be positioned under one shoulder with the hand directly on top of it. The “V” between the thumb and forefinger will be in line with the shoulder. The elbows will not point away from the torso more than 45 degrees. Throughout the entire exercise the Marine will keep the stomach sucked in and the back flat. The hips should be in line with the shoulders and the head will be in a neutral position (see figure 1). The exercise can be executed to the commands up and down or four-count cadence. On order, the Marine will lower the torso and lower body to the deck, maintaining the previously described alignment, until the chest is even with the sand bag (see figure 2). On order, the Marine will press to the up position and hold (see figure 3). The stomach will be sucked in tightly and the back straight. The arms will be straight and elbows locked out; the hips will remain up and in alignment with the shoulders. To ensure proper form, the exercise should not be executed at a high tempo.



figure 1

figure 2

figure 3

12. Plyo Push-Up

EXECUTION: The Marine will begin in the front leaning rest position with the hands shoulder width apart. The sand bag will be positioned under the chest and between the shoulders. The “V” between the thumb and forefinger will be in line with the shoulder. The elbows will not point away from the torso more than 45 degrees. Throughout the entire exercise the Marine will keep the stomach sucked in and the back flat. The hips should be in line with the shoulders and the head will be in a neutral position. On order, the Marine will lower the torso and lower body to the deck, maintaining the previously described alignment, until the chest is even with the sand bag. Upon executing the down position of a push-up, the Marine will explosively push off the deck, relocating both hands atop the sand bag (see figure 1). Once the hands touch the sand bag, the Marine will rapidly push off the sand bag, relocating one hand on either side of the sand bag and returning to the proper push-up position (see figure 2). The Marine will continue to execute push-ups in the manner described above (see figure 3).



figure 1

figure 2

figure 3

13. Sit and Reach

EXECUTION: The Marine will begin by lying on the deck with arms straight and extended perpendicular to the torso. The Marine will hold the sand bag parallel to the deck above the chest. The Marine will keep the knees bent and feet in contact with the deck at all times (see figure 1). On order, the Marine will suck the stomach in and force the lower back into the deck. The Marine will use the abdominal muscles to raise the torso off the deck (see figure 2) and into the seated position (see figure 3). On order, the Marine will lower the torso back to the deck (see figure 4), until the Marine has returned to the starting position (see figure 5). The arms will remain perpendicular to the deck throughout the entire exercise and the back will remain as straight as possible.



figure 1



figure 2



figure 3



figure 4



figure 5

14. Seated Twist

EXECUTION: The Marine will begin in the seated position with the stomach tight, chest out, and a slight arch in the lower back. The sand bag will be held in front of the body at chest level; the elbows will remain positioned close to the body and the heels will remain in contact with the deck throughout the entire exercise (see figure 1). This exercise may be executed to a four-count cadence. On the command one, the Marine will move the sand bag to the left by keeping the stomach tight and rotating the hips and shoulders (see figure 2). On two, the Marine will return to the starting position. On the command three, the Marine will rotate to the right in the previously described manner (see figure 3). On four, the Marine will return to the starting position. At no time will the Marine's elbows or the sand bag touch the deck.

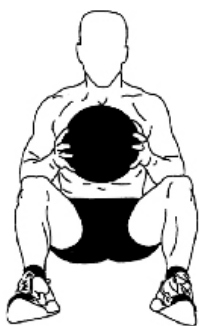


figure 1

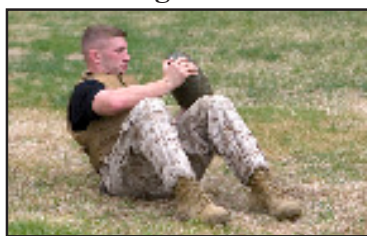


figure 2



figure 3

15. Side to Side Twist



figure 1



figure 2



figure 3

EXECUTION: The Marine will begin in the proper stance with the feet approximately shoulder width apart and knees slightly bent (see stance, page 62). The sand bag will be positioned to the Marine's left; the left hand will be beneath the sand bag and the left arm will be slightly bent. The right hand will be on top of the sand bag and the right arm will be fully extended, parallel to the deck, and crossing the Marine's chest (see figure 1). The exercise may be executed as a two or four-count cadence. On order, the Marine will twist to the right, rotating the hips and shoulders, while simultaneously reversing the hand placement and arm extension. The movement is complete when the sand bag is on the Marine's right; the right hand beneath the sand bag and the right arm slightly bent. The left hand will be on top of the sand bag and the left arm fully extended, parallel to the deck, and crossing the Marine's chest (see figure 2). On order, the Marine will transition to the left, in the previously described manner, until the sand bag is again positioned to the Marine's left (see figure 3). The path of the sand bag will always be chest level and parallel to the deck. Additionally, the Marine may raise the left and right heels to allow for proper follow through.

16. Under Hand Toss

EXECUTION: Both Marines will begin facing one another in a modified squat position with the feet approximately shoulder width apart and knees slightly bent (see stance, page 62). Both Marines will receive and toss the sand bag in the manner prescribed (see receive and toss hand position, page 62). One Marine will begin with arms extended toward the deck and the sand bag held between the legs (see figure 1). The Marine without the sand bag will begin in the same position with the hands in the receiving position. The Marine will toss the sand bag by extending the arms in an underhand fashion, aiming at the receiving Marine's hands, and tossing the sand bag in a straight line. When releasing the sand bag, the Marine will keep the stomach tight, back flat, and using the arms without rising out of the modified squat position (see figure 2). The Marine receiving the sand bag will absorb the momentum of the sand bag by decelerating it to the starting position between the legs (see figure 3). The receiving Marine will immediately toss the sand bag to the other Marine.



figure 1

figure 2



figure 3

17. Wood Chopper



figure 1



figure 2

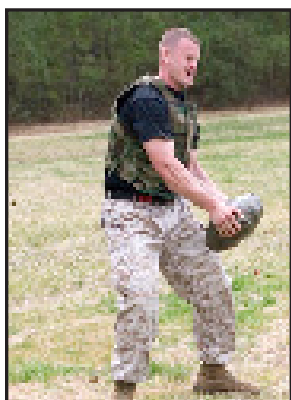
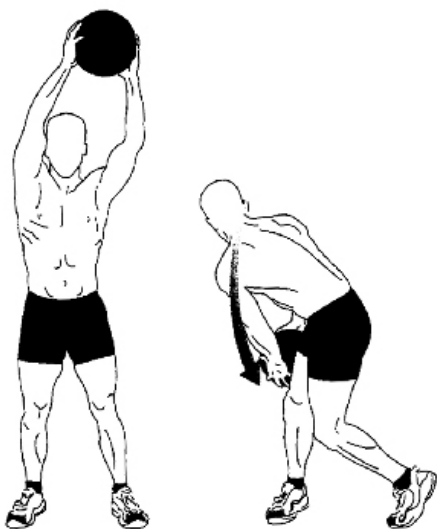


figure 3

EXECUTION: The Marine will begin in the proper stance with the feet approximately shoulder width apart and knees slightly bent (see stance, page 62). The back will be straight with the stomach sucked in tightly. The arms will be extended and the elbows slightly bent. The sand bag will be positioned above the Marine's right shoulder; the hands will be positioned on the sides of the sand bag (see figure 1). On order, the Marine will rotate the hips and shoulders, lowering the sand bag across the body (see figure 2), ending at the opposite hip (see figure 3). The left heel may rise to allow for proper follow through. On order, the Marine will rotate the hips and shoulder, raising the sand bag across the body, until the sand bag is again positioned above the Marine's right shoulder.



18. Side Toss

EXECUTION: Both Marines will begin facing one another in the proper stance with the feet approximately shoulder width apart and knees slightly bent (see stance, page 62). Both Marines will receive and toss the sand bag in the manner prescribed (see receive and toss hand position, page 62). One Marine will stand with the arms fully extended, elbows slightly bent, and sand bag positioned to the right side of the body (see figure 1). The Marine will toss the sand bag by rotating the hips and shoulders while simultaneously elevating the arms. The Marine tossing the sand bag will toss it in a straight line, aiming at the receiving Marine's hands (see figure 2). When releasing the sand bag, the Marine will do so in an underhand fashion and remaining in the receiving position awaiting the return of the sand bag. The Marine receiving the sand bag will absorb the momentum of the sand bag by decelerating it to the starting position to the right side of the body, with the arms fully extended and the elbows slightly bent (see figure 3). The receiving Marine will immediately toss the sand bag to the other Marine. Once time or repetition requirements have been satisfied, the Marines will reposition the sand bag on the left side of the body, perform the exercise in the previously described manner, and fulfill time or repetition requirements.



figure 1



figure 2



figure 3

(W) SAND BAG WITH HANDLE EXERCISES

The sand bag with handle exercises were developed to train a Marine's explosive power utilizing hip extension and core strength. The multi-joint movements trained in these exercises allows the body to work as one unit, increasing muscular strength and endurance, and reducing the risk of injury.

Refer to page 62 to review the stance position.



1. Sand Bag Clean

EXECUTION: The Marine will begin in the proper stance with the feet approximately shoulder width apart and knees slightly bent (see stance, page 62). The back will be straight with the stomach sucked in tightly. The sand bag will be positioned between the Marine's legs. One arm will be fully extended with the hand grasping the sand bag handle. On order, the Marine will aggressively lift the sand bag from between the legs by explosively generating momentum through hip and leg extension (see figure 1). The Marine will quickly elevate the elbow, causing the arm to bend (see figure 2). The explosive momentum exerted upon the sand bag will create a moment of temporary weightlessness, during which the Marine will change levels and position him or herself under the sand bag. The bent arm will create a "cradle" between the forearm and shoulder in which to receive the sand bag (see figure 3). The Marine will not "flick" the wrist to position the sand bag in the "cradle." The sand bag should be slowly and safely returned to the starting position with the assistance of gravity.



figure 1

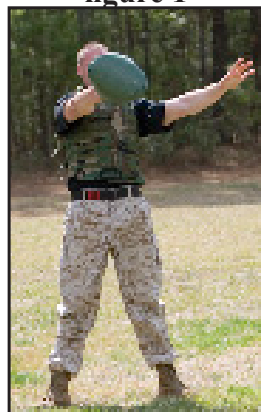


figure 2

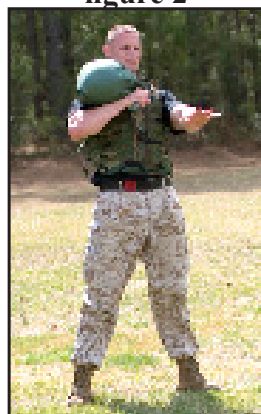


figure 3

2. Sand Bag Swing

EXECUTION: The Marine will begin with the feet approximately shoulder width apart and knees bent (see stance, page 62). The back will be straight with the stomach sucked in tightly. The sand bag will be positioned between the Marine's legs. The arms will be fully extended with the hands grasping the slack just below the sand bag handle (see figure 1). On order, the Marine will aggressively lift the sand bag from between the legs by explosively generating momentum through hip and leg extension (see figure 2). The full hip extension will quickly elevate the sand bag to eye level



figure 1

figure 2



figure 3

figure 4

or slightly above (see figure 3). The sand bag will naturally fall to the deck, guided between the legs by the Marine's fully extended arms (see figure 4). The arms will remain straight and fully locked out. The Marine will neither use the musculature of the upper body to elevate the sand bag, nor will the Marine bend at the waist to compensate for the weight of the sand bag. This exercise can be performed with a two- or one-handed grip on the sand bag handle.

3. Sand Bag Push Press

EXECUTION: The Marine will begin with the feet approximately shoulder width apart and knees bent (see stance, page 62). The back will be straight with the stomach sucked in tightly. The head will be erect throughout the exercise. The sand bag will be positioned on the Marine's right shoulder. The right arm will be bent with the forearm almost perpendicular to the deck and the elbow in line with the shoulder. The right hand will grasp the sand bag handle. The left arm may be used to assist the Marine's balance (see figure 1). On order, the Marine will slightly lower the center of gravity through hip and knee flexion; this technique is known as the "dip." The Marine will quickly follow the "dip" by extending the hips and knees, while simultaneously extending the right arm upward into the fully locked out position; this technique is known as the "drive" (see figure 2). After executing the "dip" and "drive," the Marine's right arm will be fully locked out, while the hips will be forward, legs straight, and knees slightly bent (see figure 3). The sand bag should be slowly and safely returned to the starting position with the assistance of gravity. Once time or repetition requirements have been satisfied, the Marine will reposition the sand bag on the left side of the body, perform the exercise in the previously described manner, and fulfill time or repetition requirements.

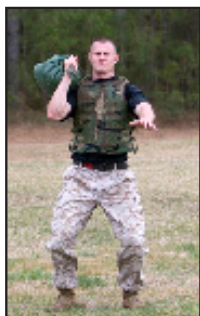


figure 1

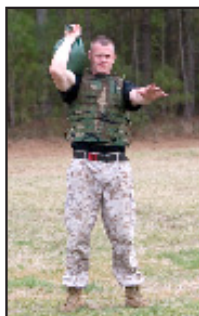


figure 2

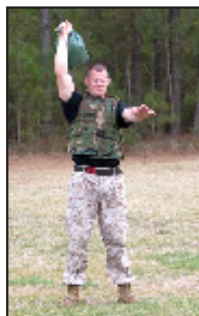


figure 3

4. Sand Bag Snatch



figure 1

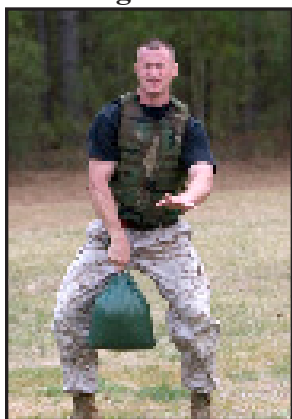


figure 2

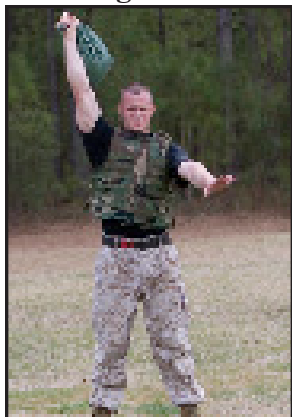


figure 3

The Marine will begin in the proper stance with the feet approximately shoulder width apart and knees slightly bent (see stance, page 62). The back will be straight with the stomach sucked in tightly. The sand bag will be positioned between the Marine's legs. One arm will be fully extended with the hand grasping the sand bag handle. On order, the Marine will aggressively lift the sand bag from between the legs by explosively generating momentum through hip and leg extension (see figure 1). The Marine will quickly elevate the elbow, causing the arm to bend (see figure 2). The explosive momentum exerted upon the sand bag will create a moment of temporary weightlessness, during which the Marine will change levels and position him or herself under the sand bag. Once under the sand bag, the Marine will receive the sand bag by fully extending the arm and locking the elbow (see figure 3). The Marine will not "flick" the wrist to position the sand bag in the fully extended position. The sand bag should be slowly and safely returned to the starting position with the assistance of gravity.

5. Sand Bag Get-Ups

EXECUTION: The Marine will begin by lying on the back with the shoulder blades flat on the deck. One arm will be fully extended and almost perpendicular to the body, while the other arm will be fully extended and perpendicular to the deck with the elbow locked. The hand will be in line with the shoulder and grasping the handle of the sand bag (see figure 1). The arm will be fully extended at all times and the elbow locked out. The Marine will continually keep the head and eyes oriented on the sand bag throughout the exercise. On order, the Marine will sit up and place the free hand on the deck for balance and support. The Marine will post the foot opposite the free hand flat on the deck and pull the other leg between the posted leg until the Marine is in a kneeling position (see figure 2). From the kneeling position, the Marine will begin to stand while keeping

the arm fully extended and the elbow locked (see figure 3). Once fully upright (see figure 4), the Marine will reverse the process until he or she has returned to the starting position. One repetition consists of the movement from the starting position to standing and back to the starting position.

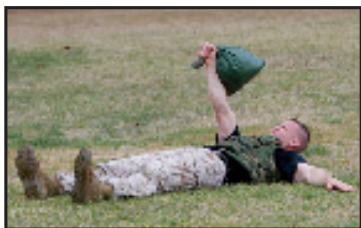


figure 1



figure 2



figure 3



figure 4

6. Sand Bag Squat Press

EXECUTION: The Marine will begin in the proper stance with the feet approximately shoulder width apart and knees slightly bent (see stance, page 62). The arms will be bent and the sand bag will be held in front of the body, at or below chin level. The elbows will be bent and directly under the sand bag. On order, the Marine will bend at the knees, keeping the stomach sucked in and the back flat. The knees will not move forward past the toes. Although the optimal bend in the knee will result in slightly less than a 90 degree angle, individual flexibility will determine the Marine's ability to perform a deep squat. The lumbar curve of the lower back will be maintained throughout the course of the exercise; weight will be distributed through the heels, while the chest and posterior are pushed out. The Marine will maintain the sand bag in front of the body, at or below chin level (see figure 1). The Marine will drive upward, extending the hips and straightening the legs, while simultaneously extend the arms, pressing the sand bag upward (see figure 2). The elbows will remain in and the sand bag will travel perpendicular to the deck until full extension is reached. The Marine will ensure the back is flat and stomach sucked in tightly; the range of motion shall not cause the Marine to sway or break stance (see figure 3). After full extension, the Marine will rapidly retract the sand bag to the starting position. This exercise will be conducted as quickly as possible without sacrificing proper technique.



figure 1

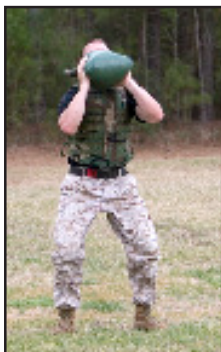


figure 2



figure 3

AGILITY TRAINING AND TACTICAL SPRINTS

Chapter 6

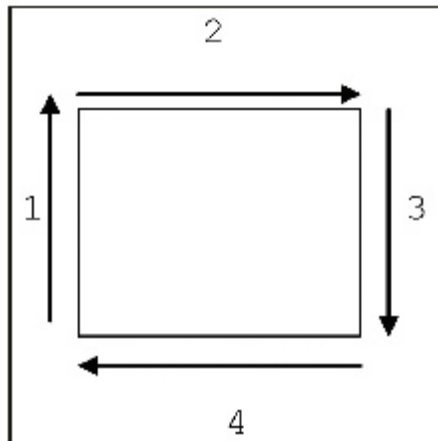
Doing agility training gives you the ability to change directions quickly and reduces chances of injury to the body. Agility training is important from the aspect of doing patrols in low light conditions, assaulting an objective, airborne operations, in close fighting, and bayonet engagements, etc. Agility training teaches the body to move in various directions without slowing the body down. Agility training addresses our bio-motor ability, center of gravity, equilibrium, movement patterns, and muscle programmability, thus increasing our ability to move on the open battlefield with increased combat coordination. This can be done in many forms, such as cone drills, agility ladders, dyna disc, mini hurdles, etc.) These drills can be integrated into immediate action drills, command and control drills, fire and movement around obstacles with an individual, squad and even section. It is important when you are designing agility drills that you start simple first and move into more complex drills as you progress your Marines.



Cone Drills Diagram

Cone drills are a tool for training agility. Agility is the ability to change direction or change a movement pattern quickly. Cone drills train a Marine to react quickly on the battlefield and decrease the chances of lower extremity injury due to the body's adaptation from training this type of movement. Cone drills train the body to move in various directions by helping Marines increase their coordination, speed, balance, accuracy, and reaction.

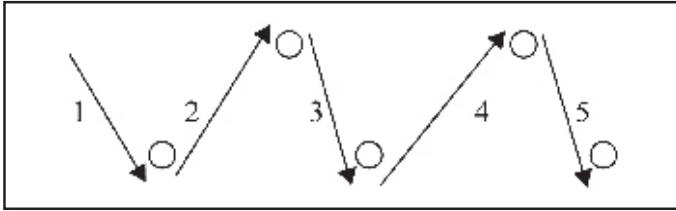
Box Drill



1. Forward run
2. Shuffle
3. Backward run
4. Carioca

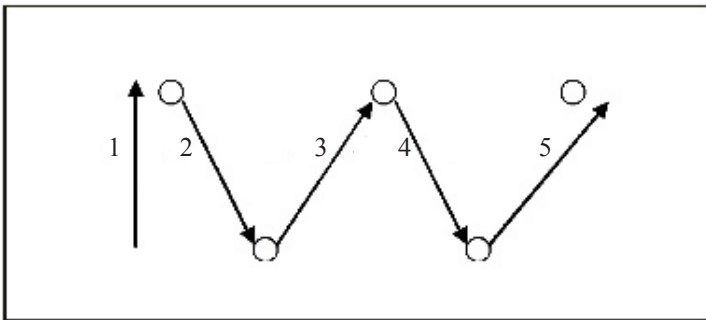
Cone Drills Diagram

Zigzag Drill



Sprints

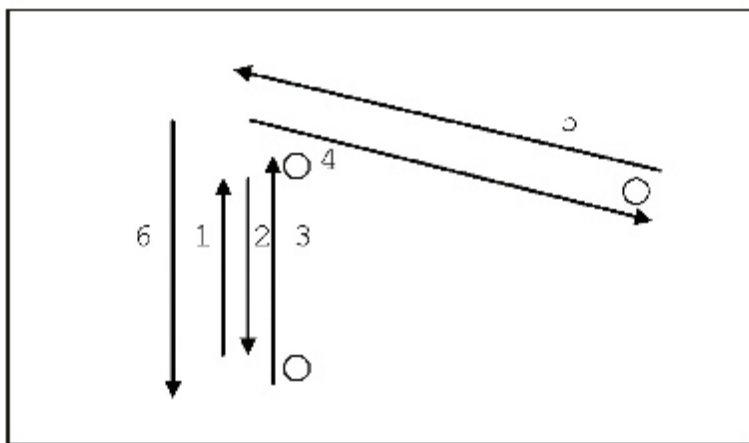
W Drill



1. Forward run
2. Backward run
3. Shuffle
4. Shuffle
5. Carioca

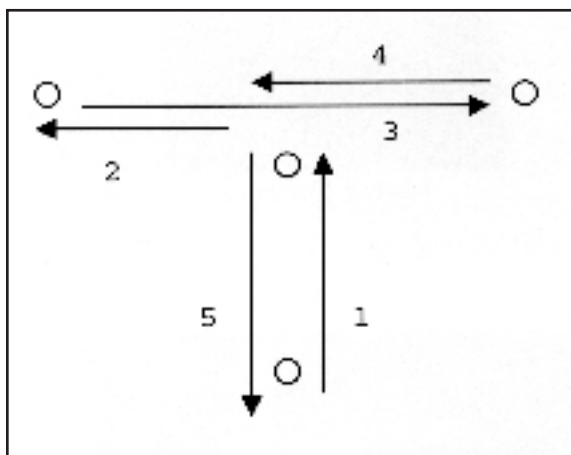
Cone Drills Diagram

L Drill



Sprints

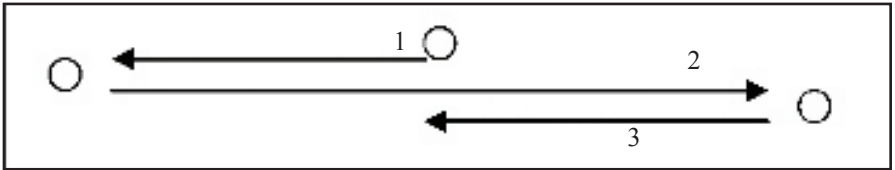
T Drill



1. Forward run
2. Shuffle
3. Carioca
4. Shuffle
5. Backward run

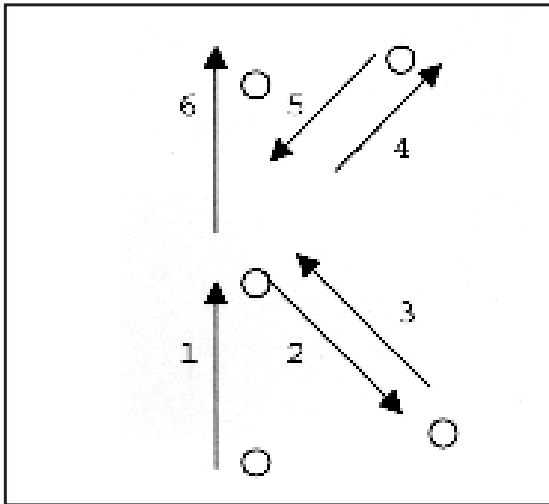
Cone Drills Diagram

10-5-10 Drill



Sprints

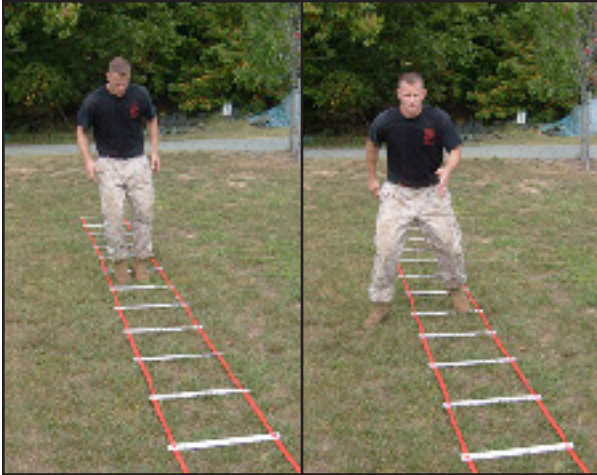
K Drill



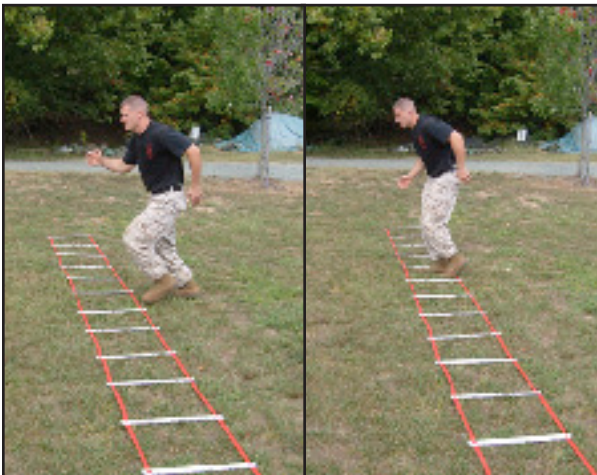
1. Forward run
2. Shuffle
3. Shuffle
4. Shuffle
5. Shuffle
6. Backward run

Ladder Drills

Ladder drills are good for developing “quick feet” and training the body to swiftly change directions or movement patterns. Agility drills, particularly ladder drills, promote coordination, as well as linear and lateral speed.



Linear Drill



Lateral Drill

Box Jump Drill

Jumping and landing skills are invaluable for the Marine to have. Box jumps are good for building power and explosiveness. They also promote balance, agility, coordination, and accuracy. There are many variations of jumps including broad, vertical, and depth jumps.





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(W) SIX FUNDAMENTAL MOVEMENTS WITH A BARBELL

Chapter 7

The Combat Conditioning Program was designed to give Marines knowledge and ideas for conducting physical training while deployed or in the field. However, if Marines have access to a gym with barbells, dumbbells, and room to work, the following exercises are an invaluable tool for training functional movement.

IMPORTANT: The body squat should be perfected before any weighted movement is executed.



1. Back Squat

EXECUTION: The Marine will begin in the proper stance with the feet approximately shoulder width apart and knees slightly bent (see stance, page 62). The bar will be evenly distributed between the trapezius and deltoid muscles and resting comfortably. The Marine will not rest the bar at the base of the neck or top of the spine. The hands will be placed evenly on the bar and as close to the body as possible in order to control the weight during movement. By keeping the grip close to the body, the shoulder muscles contract to provide a cushion on which the bar may rest, preventing the bar from gouging the spine (see figure 1). The back will be straight with the stomach sucked in tightly and lungs full of air. The head will be erect throughout the exercise (see figure 2). On order, the Marine will bend at the knees, keeping the stomach sucked in and the back flat. The knees will not move forward past the toes. Although the optimal bend in the knee will result in slightly less than a 90 degree angle, individual flexibility will determine the Marine's ability to perform a deep squat. The lumbar curve of the lower back will be maintained throughout the course of the exercise; weight will be distributed through the heels, while the chest and posterior are pushed out (see figure 3). On order, the Marine will return to the starting position by extending the hips and straightening the legs (see figure 4). To ensure proper form, the exercise should not be executed at a high tempo or with unnecessary weight.

MOVEMENT WITH A BARBELL

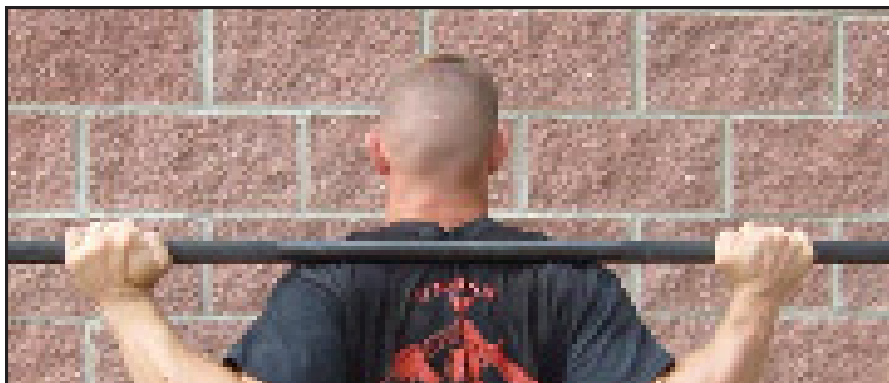


figure 1

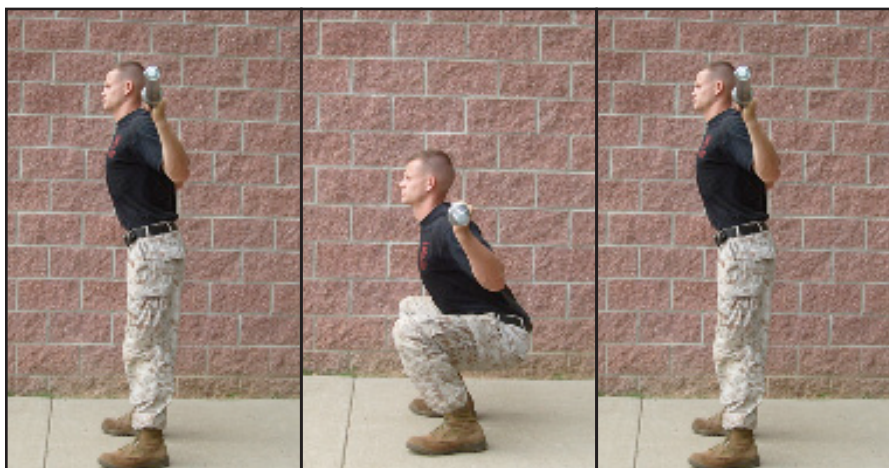


figure 2

figure 3

figure 4

2. Front Squat

EXECUTION: The Marine will begin in the proper stance with the feet approximately shoulder width apart and knees slightly bent (see stance, page 62). The bar will be evenly distributed across the top of the chest and deltoid muscles and resting comfortably. The hands will be placed evenly on the bar, approximately shoulder width apart. The hands should only “spot” the bar, rather than hold it in position; if the bar has been properly placed, the Marine will not require the grip of the hands to keep the bar in place. The elbows will be parallel to the deck with the elbows pointed forward (see figure 1). The back will be straight with the stomach sucked in tightly and lungs full of air. The head will be erect throughout the exercise (see figure 2). On order, the Marine will bend at the knees, keeping the stomach sucked in and the back flat. The knees will not move forward past the toes. Although the optimal bend in the knee will result in slightly less than a 90 degree angle, individual flexibility will determine the Marine’s ability to perform a deep squat. The lumbar curve of the lower back will be maintained throughout the course of the exercise; weight will be distributed through the heels, while the chest and posterior are pushed out (see figure 3). On order, the Marine will return to the starting position by extending the hips and straightening the legs (see figure 4). To ensure proper form, the exercise should not be executed at a high tempo or with unnecessary weight.

MOVEMENT WITH A BARBELL

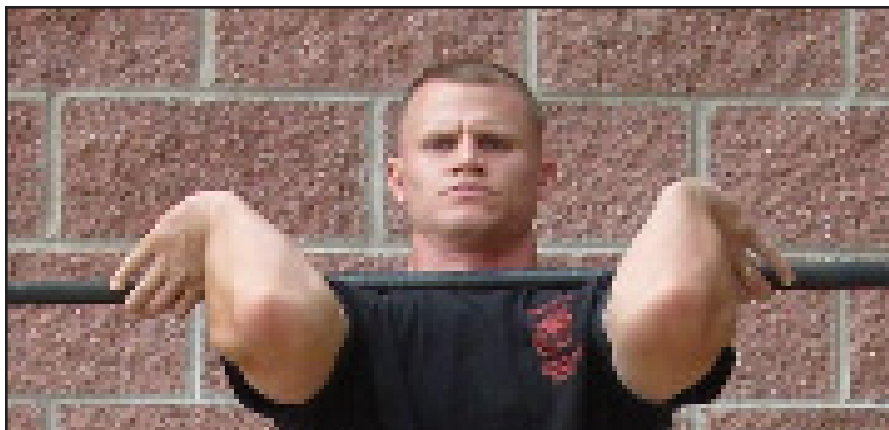


figure 1

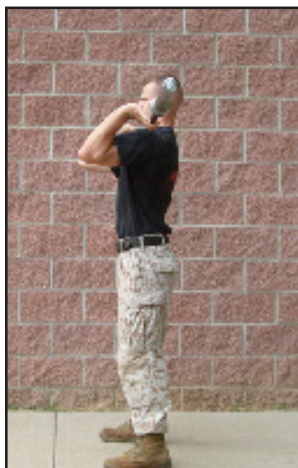


figure 2



figure 3



figure 4

3. Over Head Squat

EXECUTION: The Marine will begin in the proper stance with the feet approximately shoulder width apart and knees slightly bent (see stance, page 62). The bar will be held in front of the body at waist level. The hands will be placed evenly on the bar, approximately shoulder width apart. The hands should be placed in line with the elbow, or slightly wider, depending on the flexibility of the Marine (see figure 1). The arms will be extended and the bar locked out approximately six to eight inches overhead, directly above the ears, and parallel with the deck. The back will be straight with the stomach sucked in tightly and lungs full of air. The head will be erect throughout the exercise (see figure 2). On order, the Marine will bend at the knees, keeping the stomach sucked in and the back flat. The knees will not move forward past the toes. Although the optimal bend in the knee will result in slightly less than a 90 degree angle, individual flexibility will determine the Marine's ability to perform a deep squat. The lumbar curve of the lower back will be maintained throughout the course of the exercise; weight will be distributed through the heels, while the chest and posterior are pushed out (see figures 3 and 4). On order, the Marine will return to the starting position by extending the hips and straightening the legs. To ensure proper form, the exercise should not be executed at a high tempo or with unnecessary weight.

MOVEMENT WITH A BARBELL

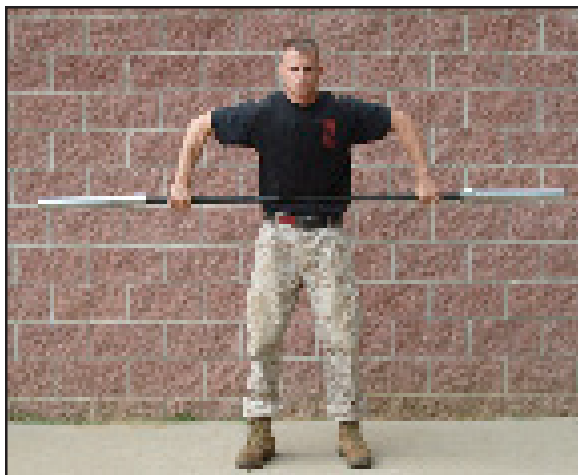


figure 1



figure 2



figure 3



figure 4

4. Dead Lift

EXECUTION: The Marine will stand upright with the feet approximately shoulder width apart. The feet will be under the hips with the toes pointed slightly outboard. The back will be straight with the lumbar curve of the lower back maintained throughout the course of the exercise. The arms will be fully extended in front of the body with the hands placed evenly on the bar and just outside of either leg. The grip may vary depending on the preference of the Marine. The Marine may grip the bar with both palms facing inboard. Alternatively, the Marine may grip the bar with the palm of the strong hand facing outboard and the palm of the weak hand facing inboard (see figure 1). The shoulders will be slightly forward of the bar and the knees will be bent (see figure 2). On order, the Marine will drive upward, pushing throughout the entire foot. The path in which the bar travels will be completely perpendicular to the deck (see figure 3). To allow the bar to travel straight, the knees will move backward as the hips extend upward. The Marine will not pull the bar around the knees (see figure 4). On order, the Marine will return to the starting position by reversing the mechanics of the lift. Maintaining a straight back, the Marine will allow the hips to settle backward before bending the knees. The Marine will not bend only at the waist. The path in which the bar travels will remain perpendicular to the deck as the bar is lowered slowly and safely. To ensure proper form, the exercise should not be executed at a high tempo or with unnecessary weight.

MOVEMENT WITH A BARBELL

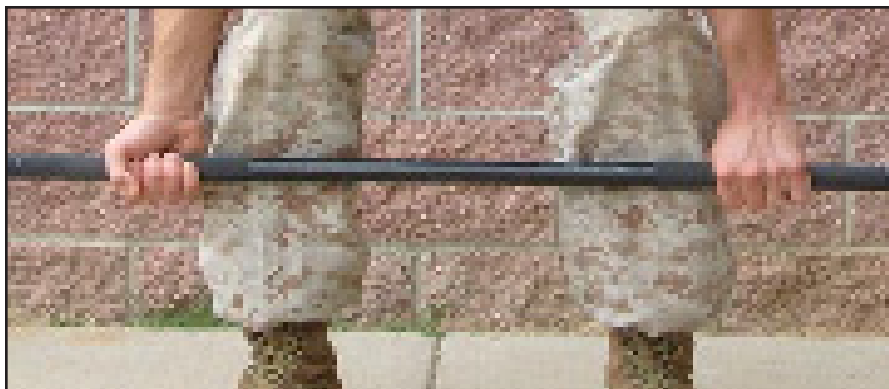


figure 1



figure 2



figure 3



figure 4

5. Power Clean

EXECUTION: The Marine will stand upright with the feet approximately shoulder width apart. The feet will be under the hips with the toes pointed slightly outboard. The back will be straight with the lumbar curve of the lower back maintained throughout the course of the exercise. The arms will be fully extended in front of the body with the hands placed evenly on the bar and slightly wider than shoulder width. The Marine will grip the bar with the palms facing inboard (see figures 1a and 1b). This position is known as the “hang” position. On order, the Marine will transition from the “hang” position by explosively jumping and simultaneously shrugging the bar (see figures 2a and 2b). The hands will maintain the bar close to the body and control the bar through the range of motion. The Marine will not use the hands as the primary means to “muscle” or move the bar. As the bar moves upward, the elbows will travel high and outward in order to keep the bar close to the body (see figures 3a and 3b). The objective of the power clean is not to pull the weight upward, but rather, to pull the body underneath the weight. As such, when the Marine “receives” the bar, the Marine will be in a partial or full front squat position with the back straight, elbows high, and feet flat on the deck. The upper arms will be parallel to the deck (see figures 4a and 4b). From the bottom position, the drive upward will be initiated through the elbows and heels. The Marine will ensure that the heels remain flat throughout the movement and the head erect. The Marine will return to the standing position by extending the hips and straightening the legs (see figures 5a and 5b). To ensure proper form, the exercise should not be executed at a high tempo or with unnecessary weight.

MOVEMENT WITH A BARBELL

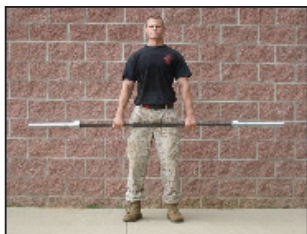


figure 1a

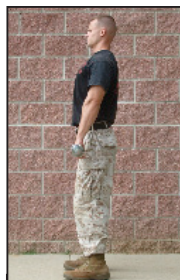


figure 1b

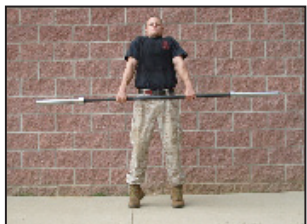


figure 2a

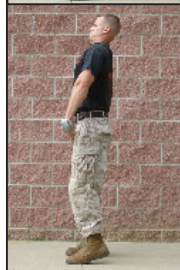


figure 2b

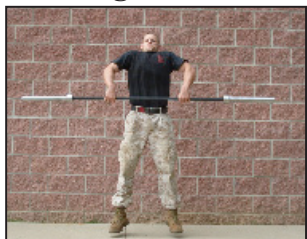


figure 3a



figure 3b

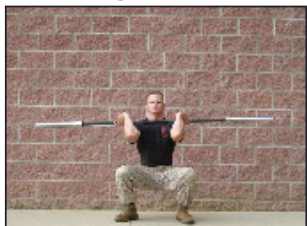


figure 4a



figure 4b

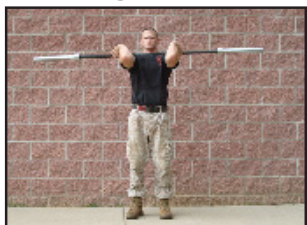


figure 5a

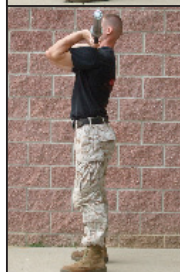


figure 5b

6. Push Press

EXECUTION: The Marine will begin with the feet approximately shoulder width apart and knees bent (see stance, page 62). The back will be straight with the stomach sucked in tightly. The head will be erect throughout the exercise. The bar will be positioned in front of the body at chest level. The hands will be placed evenly on the bar, approximately shoulder width apart and in line with the elbow (see figure 1). On order, the Marine will slightly lower the center of gravity through hip and knee flexion; this technique is known as the “dip.” The Marine will ensure the range of motion does not cause him or her to sway or break stance (see figure 2). The Marine will quickly follow the “dip” by extending the hips and knees, while simultaneously extending the arms upward into the fully locked out position; this technique is known as the “drive.” Again, the Marine will ensure that the range of motion does not cause swaying or a broken stance. After executing the “dip” and “drive,” the Marine’s arms will be fully locked out, while the hips will be forward, legs straight, and knees slightly bent (see figure 3). On order, the Marine will return the bar to the starting position (see figure 4). The Marine may “re-dip” to receive the bar in the starting position; however, the Marine should not initiate the next repetition until he or she is standing. The proper progression would be: dip, drive the bar upward, lower the bar, and reset as shown in the photographs. To ensure proper form, the exercise should not be executed at a high tempo or with unnecessary weight.

MOVEMENT WITH A BARBELL

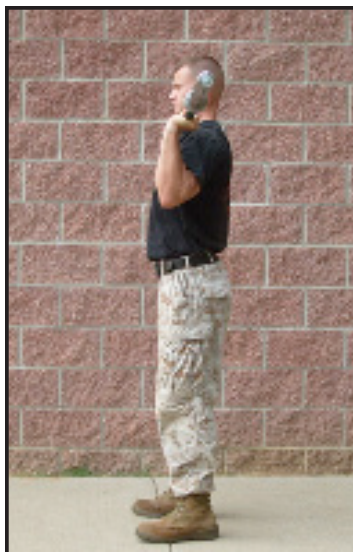


figure 1



figure 2

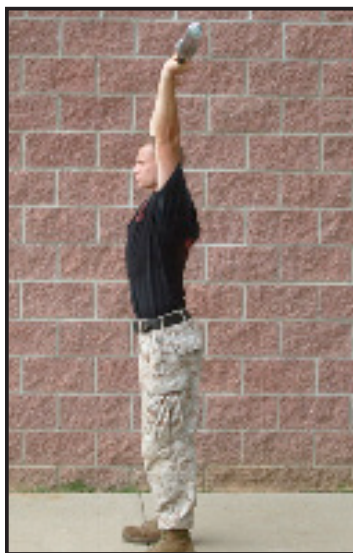


figure 3



figure 4



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COMBAT FITNESS TEST

Chapter 8

The purpose of the Combat Fitness Test (CFT), is to assess a Marine's physical capacity in a broad spectrum of combat related tasks. The CFT was specifically designed to evaluate strength, stamina, agility and coordination as well as overall anaerobic capacity. The CFT is a complement to the PFT and measures the functional elements of combat fitness through execution of a series of events that represent every Marine's combat experience, emphasizing our ethos of "every Marine a rifleman."



COMBAT FITNESS TEST

The CFT consists of three events: Movement to Contact, Ammunition Lift, and Maneuver Under Fire. No deviation from the aforementioned sequence is authorized. All CFT events shall be conducted in a single session, not to exceed 2 hours in duration. Transition between events should afford Marines adequate time to recover, stretch, hydrate, and prepare for the next event. Rest between events shall be no less than five (5) minutes. The appropriate uniform in which to conduct the CFT is the Marine Pattern (MARPAT) utility uniform. The unit commander may determine whether blouses shall be worn during the Movement to Contact. Blouses shall not be worn during the Ammunition Lift, in order to allow monitors to observe proper technique. Blouses shall be worn for the Maneuver Under Fire.

COMBAT FITNESS TEST



Movement to Contact (MTC)

- This is a timed event that can be conducted either indoors or outdoors.
- The preparatory command is “ready” and the command of execution is “go.”
- The run course will be 880 yards and must be measured for accuracy and set over reasonably level ground.
- This event can be conducted on a track or measured surface and should not include numerous sharp turns that would force a participant to slow down excessively to remain on the course. A wide turnaround point will be implemented to prevent Marines from having to stop and turnaround, causing a loss in time on the event.
- Running this event on a treadmill is not authorized.
- The goal of this event is for Marines to complete the measured course as quickly as possible.

COMBAT FITNESS TEST



Ammunition Lift (AL)

- This is a timed event with a two-minute time limit.
- This event can be conducted either indoors or outdoors.
- The preparatory command is “ready” and the command of execution is “go.”
- The AL is a repetitive lift of a 30-pound ammunition can from shoulder height to overhead.

COMBAT FITNESS TEST

- Prior to the start of the AL, Marines will be paired up by weight (within 10 pounds) and by approximate height in order to facilitate efficient transition to the Maneuver Under Fire.
- The partner counting repetitions will be located to the side of the Marine performing the AL, at approximately 90 degrees, in order to observe elbow lockout and prevent injury should the participant drop or return the ammunition can to the deck.
- When Marines are conducting the AL within close proximity, participants will conduct the event facing away from each other.
- Starting position for the AL is to hold the ammunition can sideways at shoulder height with both hands cupped underneath the can, handle facing away from the participant. The proper lifting technique is head up, chest elevated and lumbar curve maintained. Feet will remain shoulder-width apart or staggered in a basic-warrior stance position.
- The ammunition can must be lifted to a point overhead where the elbows are momentarily locked out. The ammunition can does not have to be lifted directly overhead. Once lock out is achieved, the ammunition can will be lowered to a point where the top of the can is at or below chin level. Once the ammo can is brought to this level, one repetition is counted. To reach this level, Marines may have to widen the distance between elbows. The top of the ammunition can is to remain parallel to the deck throughout the entire movement.
- A repetition will be counted when an accurate and complete overhead lift is performed.
- Marines are encouraged to use their legs to generate upward momentum of the ammunition can, especially when fatigued. There is no penalty if Marines choose not to use their legs. Alteration of stance during the AL is permissible.

COMBAT FITNESS TEST

- Marines are authorized to rest during the AL. The ammunition can may be held in the starting position or placed on the deck. If placed on the deck, the ammunition can will be lowered in a controlled movement and not thrown or dropped. Once lowered to the deck, no assistance can be provided when returning the ammunition can to the starting position. Proper technique will be utilized when returning to the starting position.
- The unit Combat Conditioning Instructor (CCI) will monitor the event ensuring elbows are locked out and the ammunition can is lowered to a point at or just below the chin.
- The goal of this event is to complete as many repetitions as possible within the two-minute time limit.

COMBAT FITNESS TEST



Maneuver Under Fire (MANUF)

- The MANUF is a timed event conducted outdoors.
- The MANUF is a 300 yard shuttle run that includes a variety of combat-related tasks, to include crawls, buddy drags/carries, ammunition re-supply, grenade throw, and agility running. (See figure 8-1 for MANUF layout, Page 122.)
- The number of monitors required is dependent upon the amount of lanes necessary to facilitate maximum throughput of a single running.
- The unit CCI is the primary MANUF monitor. Each lane will have one field monitor positioned at the 25 yard line. One grenade pit observer will verify 2 lanes. The rank requirement for MANUF monitors is NCO or above. Grenade pit observers can be any rank. Monitors may rotate as necessary and are authorized to participate in the CFT.

For example, if eight MANUF lanes are established, thirteen

COMBAT FITNESS TEST

monitors/observers are required: One primary MANUF monitor, eight field monitors and four grenade pit observers.

- Prior to execution, the primary monitor will partner Marines by weight (within 10 pounds) and approximate height (within 6 inches) and assign a lane.
- Prior to execution, the primary monitor will ensure partnered pairs are assigned lanes based on MTC times (fastest to slowest). Marines with the fastest MTC times will execute the MANUF first in order to ensure a uniform pace that facilitates overall supervision and safety of the participants. The Marine from the partnered pair not executing the MANUF first will serve as the simulated casualty (SC).
- Prior to execution, the primary monitor will direct designated SCs to proceed to the 75 yard line; sit up facing away with legs straight; one yard inboard from the right lateral limit of the assigned lane.
- Prior to execution, a dummy grenade will be placed in the center of each lane at the 75 yard line.
- Prior to execution, the primary monitor will ensure MANUF participants confirm their lane and SC location.
- Marines will start the MANUF by lying in the prone; chest on the ground; one yard inboard from the right lateral limit of the designated lane; on line with the SC located at the 75 yard line. Staggering placement, or “cocking,” of the legs is permitted while in the prone position.
- The preparatory command is “ready” and the command of execution is “go.” On the command “go,” Marines will rise and sprint to the 25 yard line.

COMBAT FITNESS TEST

- Upon reaching the 25 yard line, Marines will decelerate and execute a forward facing clockwise turn around the marker placed one yard inboard from the right lateral limit of the lane. Once the forward facing turn has been executed, Marines will drop and assume a high crawl position.
- With their chest on or behind the 25 yard line, Marines will execute a high crawl for 10 yards. The high crawl is characterized by the Marine maintaining contact with the ground with the elbows, knees, and torso.
- After high crawling 10 yards to the 35 yard line, Marines will then execute a modified high crawl for 15 yards to the 50 yard line. The modified high crawl is characterized by the Marine maintaining six (6) points of contact (hands, knees, and feet) with the ground.
- After reaching the 50 yard line, Marines will rise and negotiate a network of cones (utility flags/other markers) for 25 yards until reaching the 75 yard line. The SC will be seated at the 75 yard line with legs straight and forearms clasped together.
- Upon reaching the SC from the rear, Marines will prepare to conduct a casualty drag by reaching underneath and through the arms of the SC and obtaining a solid grasp on both forearms. Marines will then lift and drag the SC 10 yards through the first two cones to the 65 yard line. Marines will utilize proper lifting techniques by keeping the head up, chest elevated and the natural curve of the lumbar spine maintained. Field monitors may verbally guide Marines dragging the SC through the nearest two cones.
- Once the feet of the SC have passed the second cone, the field monitor will direct “Casualty Stand.” Once the SC is fully erect, Marines will lift the SC into the Fireman’s Carry position. Marines will utilize proper lifting techniques by keeping the head

COMBAT FITNESS TEST

up, chest elevated and buttocks down. The Marine will ensure the SC is placed high on the shoulders. The SC will place the palm of one hand in the small of the back for support. Marines will then transport the SC 65 yards straight back to the start line without negotiating the remainder of the cone network. Stopping to rest and/or readjust is permitted.

- Once the SC is passed through the start line, Marines will place the SC safely on the ground and lift two ammunition cans weighing 30 pounds each. Marines will utilize proper lifting techniques by keeping the head up, chest elevated and buttocks down. The Marine will transport the two 30 pound ammunition cans back to the 75 yard line, negotiating the cone network while en route.
- Upon reaching the 75 yard line, Marines will place the ammunitions cans next to the dummy grenade while utilizing a good lowering technique by bending at the knees.
- Marines will pick up the dummy grenade and engage the grenade target from the standing position. After the grenade is thrown, Marines will immediately drop to the deck and execute three push-ups. The grenade pit observer will signal to the field monitor both verbally and via hand signal whether the grenade throw was a hit or miss.
- To be counted as a hit, grenade throws must land directly in the grenade pit or strike the line marking the area. If the grenade lands in the grenade pit area, but rolls out, the throw is considered a hit. The field monitor will report the results of the grenade throw to the Marine after completion of the MANUF. Five seconds will be deducted from the overall MANUF time for hits and five seconds will be added to the overall MANUF time for misses.

COMBAT FITNESS TEST

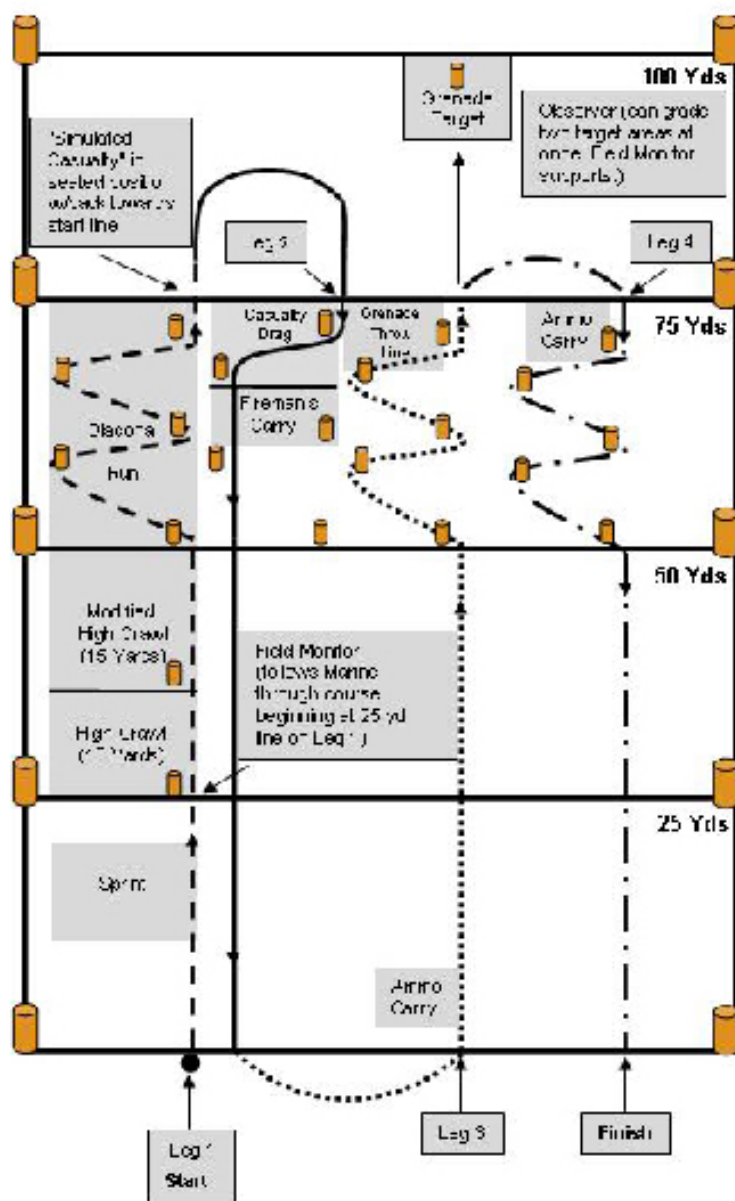
- After conducting three properly executed push-ups, Marines will pick up the ammunition cans, utilizing proper lifting techniques by keeping the head up, chest elevated and buttocks down. After negotiating the cone network, Marines will transport the ammunition cans back to the start line. The primary monitor will ensure a five yard buffer zone is maintained at the start/finish line and any personnel/equipment.
- The primary monitor will sound off as event time elapses. The field monitors will inform Marines of their respective grenade throw results. Marines will provide MANUF times and grenade throw results at the conclusion of the event. Scores will be calculated as follows:

For example, a Marine with an overall MANUF time of 2:42 and had a hit on the grenade throw portion would report “2:42 with a hit.” The Marine recording will mark the overall time for this Marine as 2:37.

The goal of this event is for Marines to complete the measured course as quickly as possible.

COMBAT FITNESS TEST

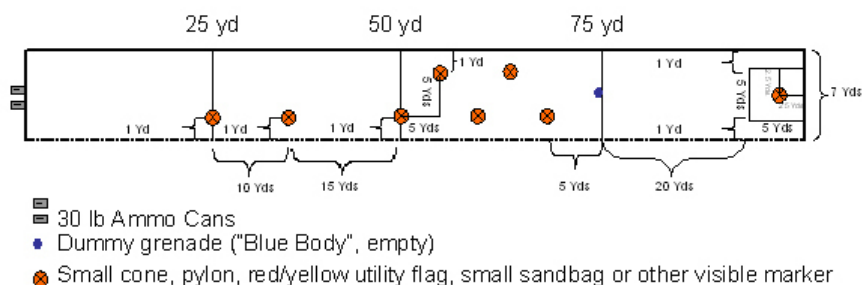
Figure 8-1 MANUF Layout (Diagram not to scale; all events occur within the same lane)



COMBAT FITNESS TEST

Figure 8-2 CFT MANUF Lane Marking

Lane Marking (Lane shown is left most lane)



COMBAT FITNESS TEST

CFT passing criteria has been derived from extensive testing of a wide sample population representing all demographics that comprise the Marine Corps Total Force. There are no differences or separate events based on gender or age. Minimum performance criteria were established utilizing specific performance percentiles, by age group. Marines must achieve the minimum performance requirement for all three events to successfully pass the CFT (See figure 8-3). Failure to meet the minimum requirement in any one event constitutes a failure of the entire test.

Figure 8-3 CFT Minimum Performance Requirements

CFT Pass/Fail Requirements				
Male				
	17-26	27-39	40-45	46+
MTC	3:48	4:00	4:19	4:30
AL	45	45	44	43
MANUF	3:29	3:55	3:57	4:28
Female				
	17-26	27-39	40-45	46+
MTC	4:34	4:40	5:09	5:20
AL	20	21	17	15
MANUF	4:57	5:27	6:07	6:30

AEROBIC TRAINING

Chapter 9

(1) Aerobic training is often linked to endurance training. Such training requires aerobic, or oxygenated, energy pathways to supply fuel to each of the working muscles. Terms often used to describe aerobic training include: cardiovascular, cardiopulmonary, or cardio-respiratory endurance training because aerobic training significantly challenges the heart (cardio), blood vessels (vascular), and lungs (pulmonary or respiratory). The purpose of aerobic conditioning is to improve the efficiency with which the body produces energy for working muscles by means of aerobic metabolism. Quite simply, cardio-respiratory endurance training will improve aerobic energy production and lead to positive long- and short-term changes within the Marine's body.

(2) Within the first few weeks of beginning a cardio-respiratory endurance program, a Marine's body will adapt to the various stresses placed upon it, resulting in a decreased heart rate whether resting or working; an increase in the amount of blood pumped by each heartbeat (stroke volume); and an increase in the amount of blood pumped by the heart in one minute (cardiac output). After engaging in a cardio-respiratory endurance program for more than 16 weeks, it is common for a Marine to possess an increased number of red blood cells; higher plasma volume in his or her blood; greater capillary density; weight loss; and a decreased resting heart rate.

(3) To develop a proper cardio-respiratory endurance program, Marines must apply the combat conditioning principle of overload. By "shocking" his or her system and allowing adequate recovery, a Marine may improve aerobic fitness while simultaneously limiting

AEROBIC TRAINING

the risk of injury and/or illness. Aerobic fitness requires three to five training sessions per week, at a moderate intensity, for a period of 20 to 60 minutes. Additionally, recent research indicates that aerobic exercise sessions may be separated into two or more sessions of at least ten minutes, resulting in significant cardio-respiratory endurance gains.

(4) There are several different exercise modes that may enhance a Marine's cardio-respiratory endurance, including, but not limited to: Running, jogging, walking, swimming, cycling, rowing, and striding on an elliptical trainer. By cross training, or providing multiple aerobic activities in a single exercise program, a Marine may increase his or her cardio-respiratory endurance through a varied, rather than boring, workout. Besides reducing boredom, the combat conditioning principle of variety allows for more enjoyable physical training sessions.

(5) Beginning an aerobic training program by imitating a friend or following a fitness magazine's schedule may not necessarily be the best approach to developing cardio-respiratory endurance. Oftentimes, sample programs present idealized training that most people with jobs, families, and additional responsibilities cannot follow without significantly disrupting their lives. The most efficient training programs are individually tailored and incorporate long slow distance, pace, and interval training sessions.

(6) Long Slow Distance Training. Long slow distance training is conducted at an intensity of approximately 50 to 85 percent of one's heart rate reserve (HRR). The HRR may be determined by subtracting the resting heart rate (the number of heartbeats per minute while at rest) from the maximal heart rate ($220 - \text{one's age}$). Long slow distance training should be performed for a duration ranging from 30 minutes to several hours. The main benefit of this type of training is improved energy production due to an increase

AEROBIC TRAINING

in the amount of capillaries transporting oxygen and nutrients to the working muscles, as well as an increase in the number of mitochondria in each muscle cell.

(7) **Pace Training.** Pace training involves exercise sessions that are conducted at approximately the same pace in which one runs the semi-annual physical fitness test three-mile run or slightly faster. Pace training forces a Marine to push him or herself and challenges the Marine's body to adapt. Just as in strength training, the body will respond to the demands placed upon it; if a Marine always runs at the same pace, the body will not be stimulated to adapt and become more efficient. Unlike long slow distance training, pace training relies on a combination of aerobic and anaerobic energy production. Training with high intensity will often cause a rapid increase in breathing rate, as well as a burning or heavy sensation in the working muscles. Such sensations are caused by an increased production of lactate, a product of anaerobic energy production. After an appropriate cool-down period, Marines may effectively remove lactate from muscles by participating in a comprehensive flexibility session. The main benefits of pace training are the improvement of one's running economy and the understanding of how to run with high intensity.

(8) **Interval Training.** Interval training consists of short, high intensity bouts ranging in duration from 30 seconds to a several minutes. The purpose of interval training is to condition one's body to elevate performance and exercise at very high intensities. Much like sprinting at the end of a long distance run, interval training assists Marines in pushing beyond an already strenuous capacity. An interval session may consist of five to ten interval and recovery sessions. It is important to remember that interval training is very stressful. As such, after each interval session, an equal period of rest or low intensity exercise should be allotted for recovery. Additionally, interval training should be limited to a small portion

AEROBIC TRAINING

of one's overall cardio-respiratory endurance training program. Interval training in excess not only results in fatigue, but carries a heightened risk of injury as well.

(9) Benefits of Cardio-Respiratory Endurance. A properly designed cardio-respiratory endurance training program, consisting of three to five sessions per week, will provide a Marine with a strong aerobic fitness level. By combining long slow distance, pace, and interval training, a Marine will likely maximize his or her performance during day-to-day physical activities, as well as the semi-annual physical fitness test.

Seven Basic Standards

COMBAT CONDITIONING DRILLS FOR BELT LEVELS

MARTIAL ARTS DRILL							
Procedure/Technique		Basic		Intermediate		Advanced	
		Tan	Gray	Green	Brown	Black	MAIT
Movement Techniques		20M	30M	30M	40M	40M	50M
Exercises		15 reps max		25 reps max		35 reps max	
Physical Technique		5 reps/30 sec.		10 reps/1 min.		20 reps/2 min.	
Equipment		Boots Cammies	Flack Jacket	Helmet Rifle	LBV	25 lb. Pack	
PHYSICAL TRAINING INTEGRATION DRILLS							
Procedure/Technique		Basic		Intermediate		Advanced	
		Tan	Gray	Green	Brown	Black	MAIT
Movement Techniques		20M	30M	30M	40M	40M	50M
Exercises		15 reps max		25 reps max		35 reps max	
Physical Technique		5 reps/30 sec..		10 reps/1 min.		20 reps/2 min.	
Rough Terrain		1 mi	1.5 mi	2 mi	2.5 mi	3 mi	
Obstacle Course		1	2	3	4	5	
Equipment		Boots Cammies	Flack Jacket	Helmet Rifle	LBV	25 lb. Pack	
FIELD EXERCISES							
Procedure/Technique		Basic		Intermediate		Advanced	
		Tan	Gray	Green	Brown	Black	MAIT
Movement Techniques		20M	30M	30M	40M	40M	50M
Exercises		15 reps max		25 reps max		35 reps max	
Physical Technique		5 reps/30 sec..		10 reps/1 min.		20 reps/2 min.	
Equipment		Boots Cammies	Flack Jacket	Helmet Rifle	LBV	25 lb. Pack	
MARTIAL ARTS DEPLOYED DRILL							
Procedure/Technique		Basic		Intermediate		Advanced	
		Tan	Gray	Green	Brown	Black	MAIT
Movement Techniques		20M	30M	30M	40M	40M	50M
Exercises		15 reps max		25 reps max		35 reps max	
Physical Technique		5 reps/30 sec..		10 reps/1 min.		20 reps/2 min.	
Equipment		Boots Cammies	Flack Jacket	Helmet Rifle	LBV	25 lb. Pack	
AQUATIC DRILL							
Procedure/Technique		Basic		Intermediate		Advanced	
		Tan	Gray	Green	Brown	Black	MAIT
Movement Techniques		20M	30M	30M	40M	40M	50M
Exercises		15 reps max		25 reps max		35 reps max	
Equipment		Boots Cammies	Flack Jacket	Helmet Rifle	LBV	25 lb. Pack	

Hydration Analysis Chart

Urine Color



OK



DRINK 1 CANTEEN



**DRINK 1 CANTEEN
OVER 15 MINUTES**



**DRINK 2-3 CANTEENS
OVER 60 MINUTES**



Signs of Dehydration

- Dryness in the mouth
(cotton mouth)
- Shortness of breath
- Headache
- Decrease and/or
discoloration in urine
- Nausea and/or vomiting,
loss of appetite
- Loss of coordination
- Confusion
- Elevated core
temperature

Heat SOP Card

FLUID REPLACEMENT GUIDELINES FOR WARM WEATHER

EASY WORK

- Walking maintenance
- Walking hard surface at 2.5mph, < 30lb load
- Manual of arms
- Marksmanship training
- Drill and ceremony

MODERATE WORK

- Walking loose sand at 2.5mph, no load
- Walking hard surface at 3.5mph, < 40lb load
- Calisthenics
- Patrolling
- Individual movement technique; e.g., low crawl
- Defensive position construction
- Field assaults

STRENUOUS WORK

- Walking hard surface at 3.5mph, > 40lb load
- Walking loose sand at 2.5mph with load
- Running and participating in physical conditioning training

FLUID REPLACEMENT GUIDELINES FOR WARM WEATHER

EASY WORK

FLAG CONDITION	WBGT F	WORK/REST	WATER PER HOUR
GREEN	80-84.9	NO LIMIT	1/2 QT
YELLOW	85-87.9	NO LIMIT	3/4 QT
RED	88-89.9	NO LIMIT	3/4 QT
BLACK	90 & <	30/10	1 QT

MODERATE WORK

FLAG CONDITION	WBGT F	WORK/REST	WATER PER HOUR
GREEN	80-84.9	50/10	3/4 QT
YELLOW	85-87.9	40/20	3/4 QT
RED	88-89.9	30/30	3/4 QT
BLACK	90 & <	20/40	1 QT

STRENUOUS WORK

FLAG CONDITION	WBGT F	WORK/REST	WATER PER HOUR
GREEN	80-84.9	40/20	1 QT
YELLOW	85-87.9	30/30	1 QT
RED	88-89.9	20/40	1 QT
BLACK	90 & <	10/50	1 QT

- Drink lots of fluids. Avoid fluids that contain alcohol, caffeine, or sugar.
- Plan strenuous activities/games early or late in the day to avoid the hot, midday to late afternoon period.
- Some prescribed medications and sun don't mix well. Check with your doctor and medicine labels. Use sun block and build up sun/heat tolerance gradually.

- At the first sign/symptom of heat stress, get out of the sun, rest, and slowly hydrate. When in doubt about the type of heat stress, seek medical help.
- The wearing of body armor/helmets or nuclear, biological, chemical (NBC) protective uniforms in effect adds 10 degrees Fahrenheit to the measured Wet Bulb Globe Temperature. Training must be adjusted approximately.



Training Notes



Training Notes



Training Notes

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12 Week Combat Conditioning Schedule

DAY 1 Monday	DAY 2 Tuesday	DAY 3 Wednesday	DAY 4 Thursday	DAY 5 Friday	DAY 6 Saturday	DAY 7 Sunday
DWU: Front Skip, Slow Canoecca Core Specific: Plank Pos. Event: For time - - 800 meter run - 25 med ball lunges (hugging ball) - 600 meter run - 50 med ball deadlifts - 400 meter run - 75 med ball squats (hugging ball) Cool down Flexibility: PNF Stretching	DWU: High Foot Lunge, Lateral J-Jacks, Jumping and Landing drills Core Specific: Crunch/Hyper Ext. series Event: Complete as many rounds as possible in 20 minutes: - 65 pound push-press, 12 reps - 10 pull-ups Cool down Flexibility: DROM	DWU: Agility Ladder 2 in, 2out/Zig-Zag/Nike Shuffle Event: - 3 Mile Ruck March with 40 lbs Pack - Push-up/Squat with pack series Core Specific: None Cool down Flexibility: PNF Stretching	DWU: Front Skips/A-Skips forward/lateral Event: For time - - Run 400 meters - 21 pull-ups - 65 lbs thruster, 9 reps - Run 400 meters - 15 pull-ups - 65 lbs thruster, 15 reps - Run 400 meters - 9 pull-ups - 65 lbs thruster, 21 reps Core Specific: Med Ball Sit & Reach/Crazy Eights/Bicycles Cool down Flexibility: DROM	DWU: Running Mech. Drills Event: - 1.5 mile run B&U Core Specific: Buddy Exercise Ab series Cool down Flexibility: Static Stretching	REST	REST
Compare Event to: Use 20 lbs sand bag for Med Ball	Compare Event to: Complete as many Rounds as possible in 20 minutes: - 20 sand bag swings - 15 push-ups - 10 pull-ups	Compare Event to: Same as above	Compare Event to: Use 30 lbs sand bag for thrusters x 30	Compare Event to: Same as above		
DWU: Cone Box Drills Core Specific: Plank Pos. Event: Complete as many rounds as possible in 20 minutes: - 5 pull-ups - 10 push-ups - 15 squat Cool down Flexibility: PNF Stretching	DWU: Front Skip/High foot lunge/falling start sprint Core Specific: Med ball core series Event: Five rounds for time of: - Run 400 meters - 75 lbs power clean, 15 reps Cool down Flexibility: DROM	DWU: Running Mech. Drills Event: - Run 3 miles Core Specific: Buddy exercise Ab series Cool down Flexibility: PNF Stretching	DWU: Agility Ladder 2 in, 2 out/2 in scissors/jump scotch Event: Five rounds for time of: - 95 pound deadlift, 15 reps - Run 400 meters - 15 sit-ups Core Specific: None Cool down Flexibility: DROM	DWU: A-Skips/lateral A-skips/falling starts Core Specific: None Event: Five rounds for time with a three minute break between rounds: - 20 pull-ups - 30 push-ups - 40 sit-ups - 50 squats Cool down Flexibility: Static stretching	REST	REST
Compare Event to: Same as above	Compare Event to: Five rounds for time of: - Single arm sand bag cleans x 30 each arm - Run 400 meters	Compare Event to: Same as above	Compare Event to: Five rounds for time of: - Buddy Deadlift x 20 - Run 400 meters - 15 sit-ups	Compare Event to: Same as above		

Week 1

Week 2

DAY 1 Monday	DAY 2 Tuesday	DAY 3 Wednesday	DAY 4 Thursday	DAY 5 Friday	DAY 6 Saturday	DAY 7 Sunday
DWU: Cone "K" Drill/with and without packs Event: <ul style="list-style-type: none"> - 5 Mile Ruck March with 50 lbs pack Core Specific: Med Ball core series Cool down Flexibility: PNF Stretching	DWU: A-Skips/lateral A-skips/Vertical skips/falling starts Event: Complete as many rounds as possible in 20 minutes: <ul style="list-style-type: none"> - 35 pound dumbbell snatch left arm, 10 reps - 35 pound dumbbell snatch right arm, 10 reps - 12 pull-ups Core Specific: Plank Pos. Cool down Flexibility: Buddy Asst. Stretching	DWU: C&J odd objects Event: For time - high <ul style="list-style-type: none"> - 50 box jumps, 24 inches - 50 burpees, jumping to 12 inches above reach - 50 ball slams, 20 pound ball - 50 wall-balls, 20 pound ball, target ten feet above ground - 50 ball cleans, 20 pound ball Core Specific: Buddy Exercise Ab series Cool down Flexibility: DROM	DWU: Bear crawl, Crab walk, 10 yard pack strap carry Core Specific: Crunch/Hyper Ext series Event: Complete as many rounds as possible in 20 minutes: <ul style="list-style-type: none"> - 5 handstand push-ups - 15 pull-ups - 25 squats Cool down Flexibility: PNF Stretching	DWU: Deadlift review/ROM Event: <ul style="list-style-type: none"> - Deadlift 5-5-5-5 Core Specific: None Cool down Flexibility: Static Stretching	REST	REST
Compare Event to: Same as Above	Compare Event to: Complete as many rounds as possible in 20 minutes: <ul style="list-style-type: none"> - Sand bag snatch x 15 - 12 pull-ups 	Compare Event to: For time: <ul style="list-style-type: none"> - 50 sandbag med ball star jumps - 50 burpees - 50 sandbag med ball slams - 50 sandbag wall-balls - 50 sandbag cleans 	Compare Event to: Same as Above	Compare Event to: 3 rounds for time: <ul style="list-style-type: none"> - 5 buddy squats - 10 buddy Deadlifts - 5 bridle curls or 5 axes 		
DWU: High Foot Lunge, Lateral J-Jacks, Jumping and Landing drills Event: 21,15 and 9 rep rounds for total time of: <ul style="list-style-type: none"> - 95 pound barbell thruster - Pull-ups Core Specific: Plank Pos. Cool down Flexibility: PNF Stretching	DWU: Running Mech. Drills Core Specific: Med Ball Core series Event: 9:00 Walk/Jog/Sprint Intervals Cool down Flexibility: DROM	DWU: Front Skip, Slow Carrocca Event: 15-12-9-6 and 3 rep rounds for total time of: <ul style="list-style-type: none"> - 95 pound clean - Ring dips - Vertical jump, 1 foot above reach Core Specific: Buddy exercise Ab series Cool down Flexibility: Static Stretching	DWU: Front squat review/ROM Event: Front squat 5-5-5-5 Core Specific: Med Ball Sit & Reach/Crazy Eights/Bicycles Cool down Flexibility: PNF Stretching	DWU: Agility Ladder 2 in, 2 out/2 in scissors/jump scotch Event: 15-12-9-6 and 3 rep rounds for total time of: <ul style="list-style-type: none"> - 185 pound deadlift - Handstand push-ups Core Specific: None Cool down Flexibility: Buddy Asst stretching	REST	REST
Compare Event to: 50, 40, 30 reps of: <ul style="list-style-type: none"> - Sandbag thrusters - Pull-ups 	Compare Event to: Same as Above	Compare Event to: 5 rounds for time of: <ul style="list-style-type: none"> - Sand bag star jumps x 20 - Vertical leaps x 10 - Push-ups x 20 	Compare Event to: Buddy Squat 5-5-5-5 Add flaks	Compare Event to: 15-12-9-6-3 reps for time: <ul style="list-style-type: none"> - Buddy Deadlift - Handstand push-ups 		

Week 3

Week 4

DAY 1 Monday	DAY 2 Tuesday	DAY 3 Wednesday	DAY 4 Thursday	DAY 5 Friday	DAY 6 Saturday	DAY 7 Sunday
DWU: Cone Box Drill Core Specific: Crunch/Hyper Ext series Event: Three rounds for time of: - 400 meter run - 50 pound dumbbell swing x 21 - 12 pull-ups Cool down Flexibility: DROM	DWU: Snatch review/ROM Event: - Power snatch 5-5-5-5 Core Specific: Plank Pos. Cool down Flexibility: Static Stretching	DWU: Bear crawl, Crab walk, 10 yard pack strap carry Event: Three rounds for time of: - Run 600 meters - 5 X (5 pull-ups, 10 push-ups, 15 squats) Core Specific: Med Ball core series Cool down Flexibility: PNF Stretching	DWU: Deadlift review/ROM Event: - Deadlift 3-3-3-3 Core Specific: None Cool down Flexibility: Buddy Asst Stretching	DWU: Agility Ladder 2 in, Zout/Zig-Zag/Nike Shuffle Core Specific: Plank Pos. Event: Five rounds for time of: - Run 400 meters - 30 box jumps, 24 inch box - 30 wall-ball shots, 20 pound ball, target ten feet above ground Cool down Flexibility: DROM	REST	REST
Compare Event to: Three rounds for time of: - 400 meter run - Sandbag swing x 30 - 12 pull-ups	Compare Event to: Axles 5-5-5-5	Compare Event to: Same as Above	Compare Event to: Buddy Deadlift 5-5-5-5 Add flaks and hold sandbags	Compare Event to: Five rounds for time: - Buddy Carry (Fireman's, pack strap, cross-body) for 50 meters - Burpees x 15 - Sandbag wall-ball x 20		
DWU: Front Skip, Slow Carioca Event: For time - - 100 pull-ups - 100 push-ups - 100 sit-ups - 100 squats Core Specific: None Cool down Flexibility: PNF Stretching	DWU: Running Mech. Drills Core Specific: Med Ball core series Event: 4 mile run in B&U Cool down Flexibility: Buddy Asst Stretching	DWU: Agility Ladder 2 in, 2 out/2 in scissors/jump scotch Event: 21-18-15-12-9-6 and 3 rep rounds for total time of: - 45 pound overhead squat - Sit-ups Core Specific: None Cool down Flexibility: Static Stretching	DWU: Back squat review/ROM Event: - Back squat 3-3-3-3 Core Specific: Crunch/Hyper Ext series Cool down Flexibility: PNF Stretching	DWU: Box Drill with and without packs Event: 6 mile Ruck March with 60 lbs pack Core Specific: Plank Pos. Cool down Flexibility: Static Stretching	REST	REST
Compare Event to: Same as Above	Compare Event to: Same as Above	Compare Event to: 30-25-20-15-10-5 reps of: - Sandbag lunge steps - Sit-ups	Compare Event to: Buddy Squats 5-5-5-5 Add flaks	Compare Event to: All Buddy Carries for 50 meters or Same as above		

W

e

k

5

W

e

k

6

DAY 1 Monday	DAY 2 Tuesday	DAY 3 Wednesday	DAY 4 Thursday	DAY 5 Friday	DAY 6 Saturday	DAY 7 Sunday
DWU: A-Skips/lateral A-skips/vertical skips/falling starts Event: Five rounds for time of: - 135 pound cleans, 12 reps - Wall ball, 20 reps, 20 pound ball, target ten feet above ground Core Specific: Crunch/Hyper Ext series Cool down Flexibility: DROM	DWU: 1 Test/Shuttle Test Event: For time - - 15 handstand push-ups - 3 L pull-ups - 12 handstand push-ups - 6 L pull-ups - 9 handstand push-ups - 6 handstand push-ups - 12 L pull-ups - 3 handstand push-ups - 15 L pull-ups Core Specific: None Cool down Flexibility: PNF Stretching	DWU: Deadlift review/ROM Event: - Deadlift 1-1-1-1-1 Core Specific: Med Ball Sit & Reach/Crazy Eights/Bicycles Cool down Flexibility: Buddy Asst Stretching	DWU: Agility Ladder 2 In 2out/Zig-Zag/Nike Shuffle Event: For time - - Run 400 meters - 95 pound thruster, 21 reps - 30 pull-ups - Run 800 meters - 30 pull-ups - 95 pound thruster, 21 reps - Run 400 meters Core Specific: Buddy Exercises Ab series Cool down Flexibility: DROM	DWU: Running Mech. Drills Core Specific: Med Ball Core series Event: 2 x 9'00 PT Gear Walk/Jog/Sprint Intervals Cool down Flexibility: PNF Stretching	REST	REST
Compare Event to: Five rounds for time: - Buddy Squats x 10 - Sand bag star jumps x 20	Compare Event to: Same as Above	Compare Event to: Buddy Deadlifts 10-10-10-10-10 Add Flacks, Packs and sand bags	Compare Event to: Use Sand bag for Thrusters x 30	Compare Event to: Same as Above		
DWU: Front Skip, Slow Canoe Core Specific: Plank Pos. Event: Lunge 400 meters (multiply steps by the time to completion rounded to nearest .5 minutes.) Cool down Flexibility: Static stretching	DWU: Jog, deep squats Core Specific: Crunch/Hyper Ext series Event: Complete as many rounds as possible in 20 minutes: - 7 Handstand push-ups - 10 pull-ups Cool down Flexibility: PNF Stretching	DWU: Bear crawl, Crab walk, 10 yard pack strap carry Core Specific: Buddy Exercises Ab series Event: - Run 4 miles B&U Cool down Flexibility: Buddy Asst Stretching	DWU: High Foot Lunge, Lateral J-Jacks, Jumping and Landing drills Event: Five rounds for time of: - 95 lbs Thruster, 15 reps - Run 400 meters Core Specific: Med ball core series Cool down Flexibility: PNF Stretching	DWU: Cone Box Drill Event: Complete as many rounds as possible in 20 minutes: - 21 Sit-ups - 21 Back Extensions Core Specific: None Cool down Flexibility: Static stretching	REST	REST
Compare Event to: Lunge 200 meters carrying sand bag or same as above	Compare Event to: Same as Above	Compare Event to: Same as Above	Compare Event to: - Sand bag Star jumps x 20 - Run 400 meters	Compare Event to: Same as Above		

DAY 1 Monday	DAY 2 Tuesday	DAY 3 Wednesday	DAY 4 Thursday	DAY 5 Friday	DAY 6 Saturday	DAY 7 Sunday
DWU: Agility Ladder 2 In, 2 out/Zig-Zag/Nike Shuffle Event: 21-18-15-12-9 rep rounds for total time of 95 poud: - Deadlift - Hang power clean - Front squat - Push-jerk Core Specific: Plank Pos. Cool down Flexibility: DROM	DWU: Bear crawl, Crab walk, 10 yard pack strap carry Core Specific: Crunch/Hyper Ext series Event: - Run 1.5 miles B&U Cool down Flexibility: PNF Stretching	DWU: Test/Shuttle Test Event: - 100 Pull-ups for time Core Specific: Buddy Exercises Ab series Cool down Flexibility: Static Stretching	DWU: Cone "K" Drill Event: - 100 Burpees, jumping to eight-foot reach height for time Core Specific: None Cool down Flexibility: DROM	DWU: Running Mech. Drills Core Specific: Med Ball Ab series Event: - Run 3 miles PT Gear Cool down Flexibility: PNF Stretching	REST	REST
Compare Event to: 21-18-15-12-9 - Buddy Deadlift - Axles - Buddy Squats - Buddy Push-ups	Compare Event to: Same as Above	Compare Event to: Same as Above	Compare Event to: Same as Above	Compare Event to: Same as Above		
DWU: Deadlift review/ROM Event: - Deadlift 3-3-3-3-3 Core Specific: L-Pull-ups, Knees to elbows 3x10 Cool down Flexibility: DROM	DWU: Agility Ladder 2 in, 2 out/2 in scissors/jump scotch Core Specific: Med Ball Sit & Reach/Crazy Eights/Bicycles Event: Three rounds for time of: - 50 Squats - Run 800 meters Cool down Flexibility: PNF Stretching	DWU: Bear crawl, Crab walk, 10 yard pack strap carry Core Specific: Crunch/Hyper Ext series Event: Complete as many rounds as possible in 20 minutes: - 10 pull-ups - 20 push-ups Cool down Flexibility: Static Stretching	DWU: Front Skip, Slow Carriocall Event: Three rounds for time of: - 50 Sit-ups - 30 Back Extensions Core Specific: None Cool down Flexibility: DROM	DWU: Jog Core Specific: Med Ball Core series Event: 2 x 9:00 B&U Walk/Jog/Sprint Intervals Cool down Flexibility: PNF Stretching	REST	REST
Compare Event to: Buddy Deadlift 5-5-5-5-5 Buddy Squats 5-5-5-5-5 Add flaks and hold sandbags	Compare Event to: Same as Above	Compare Event to: Same as Above	Compare Event to: Same as Above	Compare Event to: Same as Above		

Week 9

Week 10

DAY 1 Monday	DAY 2 Tuesday	DAY 3 Wednesday	DAY 4 Thursday	DAY 5 Friday	DAY 6 Saturday	DAY 7 Sunday
DWU: Back squat review/ROM Event: Back Squat 1-1-1-1-1-1 Core Specific: None Cool down Flexibility: Buddy Asst stretching	DWU: Running Mech. Drills Core Specific: Med Ball core series Event: Run 5 miles in B&U Cool down Flexibility: Static stretching	DWU: Agility Ladder 2 In, 2 out/Zig-Zag/Nike Shuffle Event: Complete as many rounds as possible in 20 minutes: - 95 lbs Power clean, 7 reps - 12 pull-ups Core Specific: Buddy Exercises core series Cool down Flexibility: PNF Stretching	DWU: Cone Box Drills Event: Five rounds for time of: - 95 lbs Push jerk, 15 reps - 30 Sit-ups - Run 400 meters Core Specific: None Cool down Flexibility: Static stretching	DWU: A-Skips/lateral A-skips/vertical skips/falling starts Core Specific: Crunch/Hyper Ext series Event: Ten rounds for time of: - Lunge 10 steps - 20 push-ups Cool down Flexibility: DROM	REST	REST
Compare Event to: Buddy Deadlift 5-5-5-5-5 Buddy Squats 5-5-5-5-5 Axles 5-5-5-5-5 Add flaks and hold sandbags for DL and Squat	Compare Event to: Same as Above	Compare Event to: Complete as many rounds as possible in 20 minutes: - 7 Axles - 12 Pull-ups	Compare Event to: 50, 40, 30 reps of: - Sandbag thrusters - Sit-ups	Compare Event to: Same as Above	REST	REST
Repeat week 1						

Week 11

Week 12

- WEF Format
- Week consists of: Dynamic warm-up, speed development, lateral speed and agility, complex training movements, metabolic conditioning, neuromuscular reaction and stabilization, core stabilization, dynamic range of motion and flexibility.

Food	Measure	Food Energy (Calories)	Carbohydrates (grams)
DAIRY PRODUCTS			
Ice cream, vanilla	1 cup	269	32
Milk, fluid, whole, 3.5% fat	1 cup	160	12
Buttermilk, fluid, cultured, made from skim milk	1 cup	90	12
Cheese, cottage, creamed	12 oz.	360	10
Processed cheese, cheddar, American, or American-Swiss	1 oz,	113	trace
Cream, half and half	1 cup	325	11
EGGS			
Raw	1 egg	80	trace
Scrambled	1 egg	110	1
MEAT & POULTRY			
Bacon	2 slices	90	1
Beef, lean	3 oz.	245	0
Hamburger, regular	3 oz.	245	0
Steak, broiled, lean	3 oz.	330	0
Chicken, cooked:			
Flesh only, broiled	3 oz.	115	0
Chicken, fried:			
Wing, medium	1.7 oz.	159	5
Breast, 1/2 medium	4.9 oz.	364	13
Drumstick, medium	2.5 oz.	193	6
Chicken pot pie, baked	8 oz.	535	42
Lamb chop, thick with bone	4.8 oz.	400	0
Liver, beef, fried	2 oz.	135	3
Ham, light cure, lean	3 oz.	245	0

Pork roast, lean	3 oz.	200	0
Frankfurter:			
Beef	2 oz.	186	1
Chicken	1.6 oz.	119	3
Veal cutlet	3 oz.	185	0
Turkey:			
Dark meat, roasted	1 oz.	52	0
Light meat, roasted	1 oz.	44	0
FISH			
Caviar, Beluga, 1rd tsp	0.35 oz.	26	3.3
Clams, raw, meat only	3 oz.	65	2
Cod, baked or broiled	3 oz.	103	trace
Crabmeat, canned	3 oz.	65	2
Fish sticks, battered, fried	1 stick	49	2
Lobster, steamed or broiled	1 cup	142	2
Oysters, raw meat	1 cup	160	8
Salmon, pink, canned	3 oz.	120	0
Shrimp, battered, fried	1 cup	317	16
Shrimp, canned, meat	3 oz.	100	1
Tuna, water pack	3 oz.	80	0
VEGETABLES & VEGETABLE PRODUCTS			
Asparagus, canned	1 cup	45	7
Beans, pinto, calico, red Mexican	1 cup	195	36
Beans, snap, green, cooked	1 cup	30	7
Beets, cooked	2 bts.	30	7
Broccoli, raw, 5.5" long	1 piece	32	5.9
Broccoli, cooked	1 cup	26	4.8
Brussels sprouts, cooked	1 cup	55	10
Cabbage, raw	1 cup	15	4

Cabbage, cooked	1 cup	15	4
Celery, raw, stalk, large	1 stalk	5	2
Corn, small	1 ear	70	16
Corn, canned	1 cup	170	40
Cucumbers, raw	10 oz.	30	7
Lettuce:			
Iceberg	1 cup	7	1
Romaine	1 cup	8	1
Mushrooms, canned	1 cup	40	6
Onions, raw, medium	one	40	10
Onions, green, raw	1 tbsp	2	trace
Peas, green, cooked	1 cup	115	19
Peas, green, canned	1 cup	165	31
Pepper, jalapeno, not chili, raw	1 pepper	18	4
Pepper, green, cooked	1/2 cup	12	3
Potato, medium, baked	One	90	21
Potato, french fried	10 strips	110	14
Potatoes, mashed, milk added	1 cup	125	25
Potato chips, medium	10 chips	115	10
Radish, raw, small	0.3 oz	1	trace
Sauerkraut, canned	1 cup	45	9
Spinach, cooked	1 cup	40	6
Squash, summer, cooked	1 cup	30	7
Squash, winter, baked	1 cup	130	32
Sweet potatoes, baked	One	155	36
Sweet potatoes, candied, small	One	295	60
Tomatoes, raw, medium	One	40	9
Tomato juice, canned	1 cup	45	10

GRAIN PRODUCTS			
Bagel, egg	One	165	28
Biscuits, baking powder	One	105	13
Bread, cracked wheat	1 loaf	1,190	236
Bread, enriched, French	1 loaf	1,315	251
Bread, enriched, italian	1 loaf	1,250	256
Bread, raisin	1 loaf	1,190	243
Bread, American,rye	1 loaf	1,100	236
Bread, white, enriched	1 loaf	1,225	229
Cake, angelfood	1 cake	1,645	377
Cake, pound	1 loaf	2,430	242
Cereals			
Bran flakes(40% bran)	1cup	105	28
Frosted Flakes Kellogg	1 cup	133	32
Granola	1 cup	541	61
Crackers, Saltine	Four	50	8
Danish Pastery, round piece	One	275	30
Dounuts			
Cake Type	One	125	16
Jelly	One	253	28
Glazed	One	243	27
Hamburger, hotdog bun	1	119	21
Macaroni,enriched cooked	1 cup	190	39
Noodles,enriched	1 cup	200	37
Oatmeal or rolled oats, cooked	1 cup	130	23
Pie, apple	1 sec	350	51
Pie, pumpkin	1 sec	275	32
Pizza (cheese), 1/8 of 14"diam	1sec	185	27
Popcorn,plain	1 cup	25	5

Rice			
Brown	1 cup	232	50
White,long grain	1 cup	121	29
Spaghetti, enriched, cooked	1 cup	155	32
Tortillia, corn, 6" diameter	One	41	8
Tortillia, flour 8"diameter	One	154	28
Pancakes, 5" diameter	One	88	12
Waffle, 4" square	One	102	16
SOUP(Canned, condensed)			
Chicken Noodle	1 cup	62	8
Clam Chowder			
Manhattan	1 cup	81	12
New England	1 cup	130	11
Tomato	1 cup	88	16
Vegetable beef	1 cup	78	7
Vegetarian	1 cup	78	13
FATS & OILS			
Butter, regular	1/2 cup	810	1
Lard	1 cup	1,850	0
Vegetable fat	1 cup	1,770	0
Margarine	1 cup	815	trace
Salad Dressing			
Ranch	1 tbsp	54	1
Roquefort	1 tbsp	77	1
Mayonnaise	1 tbsp	100	trace
Thousand Island	1 tbsp	80	3

SUGARS & Sweets			
Candy, milk choc sweetened	1 oz	145	16
Candy, plain fudge	1 oz	115	21
Chocolate syrup, fudge type	1 oz	125	20
Honey	1 tbsp	65	17
Jellies	1 tbsp	50	13
Sugar,brown	1 cup	820	212
Sugar,granulated	1 cup	770	199
FRUITS & FRUIT PRODUCTS			
Apple, medium fresh	One	70	18
Apple juice, bottled or canned	1 cup	120	30
Applesauce, canned, sweetened	1 cup	230	61
Bananas,medium, fresh	One	100	26
Blueberries, fresh	1 cup	85	21
Cantaloupe, medium, fresh	1/2 mel.	60	14
Cherries, fresh	10 cherries	49	11
Grapefruit, medium ,white, fresh	2-Jan	45	12
Grapefruit juice, unsweetened	1 cup	100	24
Grapes, seedless, fresh	1 cup	65	15
Grape juice	1 cup	165	42
Lemons, medium,fresh	One	20	6
Lemon juice fresh	1 cup	60	20
Lime juice fresh	1 cup	65	22
Oranges, medium, fresh	One	65	16
Orange juice, frozen undiluted	1 can	360	87
Peaches, medium fresh	One	35	10
Peaches, canned	1 cup	200	52
Pears, medium, fresh	One	100	25
Pineapple, canned, sliced	Lg. Slice	90	24

Plums, medium, fresh	One	25	7
Prune juice, canned	1 cup	200	49
Raisin, seedless pkg. 1/2 oz	1 pkg	40	11
Strawberries fresh	1 cup	55	13
Watermelon, wedge, fresh	1 wdg	115	27
NUTS			
Almonds, shelled, whole	1 cup	850	28
Cashew nuts, roasted	1 cup	785	41
Peanuts, roasted	1 cup	840	27
Pecans, halves	1 cup	740	16
Walnuts, black or native	1 cup	790	19
MISCELLANEOUS			
Alcoholic beverage 86-proof	1 1/2 oz	105	trace
Barbecue sauce	1 tbsp	14	1
Beer	12 oz	150	14
Tomato Ketchup	1 tbsp	15	4
Champagne, dry, 12.2% alcohol	1 cup	204	9.6
Corn chips	10 chips	97	10
Cola type beverage	12 oz	145	37
Ginger ale	12 oz	115	29
Mustard	1 tbsp	15	1
Salsa, cooked	1 tbsp	23	1
Wine		85	

WATER SOLUBLE VITAMINS		Source	Deficiency
Vitamin	Function		
C (Ascorbic Acid)	Antioxidant, maintenance of connective tissues	Citrus fruits, potatoes, green leafy vegetables	Scurvy, loose teeth, bleeding gums
B-1 (Thiamin)	Coenzyme in carbohydrate metabolism	Pork, grains, liver, nuts, squash	nervous system, digestive system, and heart)
B-2 (Riboflavin)	Coenzyme in energy and protein metabolism	yeast, eggs, mushrooms, greens, broccoli	red tongue, inflamed skin, eye disorders
B-6 (Pyridoxine)	Coenzyme in amino acid metabolism	fruits, leafy vegetables, broccoli	Dermatitis, neurological disorders
B-12 (Cyanocobalamin)	Coenzyme in cell division	Animal products (meat, eggs, milk)	Anemia
Niacin (Nicotinic Acid)	Coenzyme in energy metabolism	Meat, fish, grains, mushrooms, potatoes	Pellagra
Folic Acid (Folacin)	Coenzyme in cell division	Liver, grains, green vegetables	Anemia
Pantothenic Acid	Coenzyme in metabolism	Liver, yeast, eggs, grains, legumes	Fatigue, headache, nausea
Biotin	Coenzyme in carbohydrate and fat metabolism	fish, egg yolks, nuts, legumes	Dermatitis, depression
Mineral	Function	Source	Deficiency
Calcium	Bones/teeth structure, nerve/muscle function	sardines, green leafy vegetables, citrus fruits	Rickets, stunted growth, malformation of bones
Chromium	Insulin cofactor	whole grains, brewer's yeast, black pepper, nuts	Adult-onset diabetes
Copper	Cofactor in manufacture of hemoglobin, collagen	Green vegetables, seafood, liver	Anemia, retarded growth
Fluoride	Strong teeth and bones	Fluoridated water, tea, seafood	Tooth decay
Iodine	Essential part of thyroid hormone	Seafood, iodized salt, dairy products	Goiter
Iron	Part of hemoglobin	eggs, green leafy vegetables, potatoes	Anemia, fatigue, infections
Magnesium	Cofactor in metabolism	broccoli, nuts, beets, potatoes, milk	Muscle weakness, irregular heartbeat
Sodium	Water balance	Salt, soy sauce, soft water, processed foods	Weakness, cramps
Potassium	Nerve function	vegetables, meat, bananas, citrus fruits	Irregular heartbeat
Zinc	Cofactor in metabolism	Meat, shellfish, milk, legumes, whole grains	impaired sexual development
FAT SOLUBLE VITAMINS			
Vitamin	Function	Source	Deficiency
A (Retinol)	Night vision, maintain various tissues	Green vegetables, yellow and red fruits and vegetables, especially carrots	Night blindness, eye disease, skin lsions
D (Cholecalciferol)	Absorb calcium, mineralize bone	Fortified milk, fish, liver, sunshine on skin	Rickets, osteomalacia (softening of the bones)
E (Tocopherols)	Antioxidant	Vegetable oil, whole grains, egg yolk	Hemolytic anemia
K (Phytomenadione)	Blood clotting	Green leafy vegetables, liver	Lessened ability of blood to clot

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Date:		Resting Heart Rate:		Weight(lb):	
Age:		Height(in):		BMI	#DIV/0!
Reveille:		Taps:		BMR	66

Meal:	Food		Protein:	Fat:	Carbs:	Fluid Intake
Breakfast:						
Snack:						
Lunch:						
Snack:						
Dinner:						
Snack:						
Pre-						
Post						
Daily Total (Cal):			0	0	0	

Notes:

Nutrition Log

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Breakfast:						
Snack:						
Lunch:						
Snack:						
Dinner:						
Snack:						
Pre-						
Post						
Daily Total (Cal):			0	0	0	

Notes:

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Breakfast:						
Snack:						
Lunch:						
Snack:						
Dinner:						
Snack:						
Pre-						
Post						
Daily Total (Cal):			0	0	0	

Notes:

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Snack:						
Pre-						
Post						
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Lunch:						
Snack:						
Dinner:						
Snack:						
Pre-						
Post						
Daily Total (Cal):			0	0	0	

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Lunch:						
Snack:						
Dinner:						
Snack:						
Pre-						
Post						
Daily Total (Cal):			0	0	0	

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Breakfast:						
Snack:						
Lunch:						
Snack:						
Dinner:						
Snack:						
Pre-						
Post						
Daily Total (Cal):			0	0	0	

Notes:

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Breakfast:						
Snack:						
Lunch:						
Snack:						
Dinner:						
Snack:						
Pre-						
Post						
Daily Total (Cal):			0	0	0	

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Nutrition Log

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Breakfast:						
Snack:						
Lunch:						
Snack:						
Dinner:						
Snack:						
Pre-						
Post						
Daily Total (Cal):			0	0	0	

Notes:

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Breakfast:						
Snack:						
Lunch:						
Snack:						
Dinner:						
Snack:						
Pre-						
Post						
Daily Total (Cal):			0	0	0	

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Breakfast:						
Snack:						
Lunch:						
Snack:						
Dinner:						
Snack:						
Pre-						
Post						
Daily Total (Cal):			0	0	0	

Notes:

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Breakfast:						
Snack:						
Lunch:						
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Dinner:						
Snack:						
Pre-						
Post						
Daily Total (Cal):			0	0	0	

Notes:

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Breakfast:						
Snack:						
Lunch:						
Snack:						
Dinner:						
Snack:						
Pre-						
Post						
Daily Total (Cal):			0	0	0	

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Pre-						
Post						
Daily Total (Cal):			0	0	0	

Notes:

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Lunch:						
Snack:						
Dinner:						
Snack:						
Pre-						
Post						
Daily Total (Cal):			0	0	0	

Notes:

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Breakfast:						
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Lunch:						
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Dinner:						
Snack:						
Pre-						
Post						
Daily Total (Cal):			0	0	0	

Notes:

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Dinner:						
Snack:						
Pre-						
Post						
Daily Total (Cal):			0	0	0	

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Nutrition Log

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Age:	Height(in):	BMI  #DIV/0!
Reveille:	Taps:	BMR  66

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Breakfast:						
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Snack:						
Dinner:						
Snack:						
Pre-						
Post						
Daily Total (Cal):			0	0	0	

[illegible]

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Breakfast:						
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Dinner:						
Snack:						
Pre-						
Post						
Daily Total (Cal):			0	0	0	

[illegible]

Nutrition Log

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Snack:						
Dinner:						
Snack:						
Pre-						
Post						
Daily Total (Cal):			0	0	0	

Notes:

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Lunch:						
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Dinner:						
Snack:						
Pre-						
Post						
Daily Total (Cal):			0	0	0	

Notes:

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Snack:						
Dinner:						
Snack:						
Pre-						
Post						
Daily Total (Cal):			0	0	0	

Notes:

Nutrition Log

RECOMMENDATION: COPY LOG BOOK PRIOR TO USE

Date:		Resting Heart Rate:		Weight(lb):	
Age:		Height(in):		BMI	#DIV/0!
Reveille:		Taps:		BMR	66

Meal:	Food		Protein:	Fat:	Carbs:	Fluid Intake
Breakfast:						
Snack:						
Lunch:						
Snack:						
Dinner:						
Snack:						
Pre-						
Post						
Daily Total (Cal):			0	0	0	

Notes:

Nutrition Log

RECOMMENDATION: COPY LOG BOOK PRIOR TO USE

Date:		Resting Heart Rate:		Weight(lb):	
Age:		Height(in):		BMI	#DIV/0!
Reveille:		Taps:		BMR	66

Meal:	Food		Protein:	Fat:	Carbs:	Fluid Intake
Breakfast:						
Snack:						
Lunch:						
Snack:						
Dinner:						
Snack:						
Pre-						
Post						
Daily Total (Cal):			0	0	0	

Notes:

Nutrition Log

RECOMMENDATION: COPY LOG BOOK PRIOR TO USE



Date:		Resting Heart Rate:		Weight(lb):	
Age:		Height(in):		BMI	#DIV/0!
Reveille:		Taps:		BMR	66

Meal:	Food		Protein:	Fat:	Carbs:	Fluid Intake
Breakfast:						
Snack:						
Lunch:						
Snack:						
Dinner:						
Snack:						
Pre-						
Post						
Daily Total (Cal):			0	0	0	

Notes:

Nutrition Log

RECOMMENDATION: COPY LOG BOOK PRIOR TO USE



Date:	Resting Heart Rate:	Weight(lb):
Age:	Height(in):	BMI  #DIV/0!
Reveille:	Taps:	BMR  66

Meal:	Food		Protein:	Fat:	Carbs:	Fluid Intake
Breakfast:						
Snack:						
Lunch:						
Snack:						
Dinner:						
Snack:						
Pre-						
Post						
Daily Total (Cal):			0	0	0	

[illegible]

Nutrition Log

RECOMMENDATION: COPY LOG BOOK PRIOR TO USE

Date:	Resting Heart Rate:	Weight(lb):
Age:	Height(in):	BMI  #DIV/0!
Reveille:	Taps:	BMR  66

Meal:	Food		Protein:	Fat:	Carbs:	Fluid Intake
Breakfast:						
Snack:						
Lunch:						
Snack:						
Dinner:						
Snack:						
Pre-						
Post						
Daily Total (Cal):			0	0	0	

[illegible]

Nutrition Log

RECOMMENDATION: COPY LOG BOOK PRIOR TO USE

Date:		Resting Heart Rate:		Weight(lb):	
Age:		Height(in):		BMI	#DIV/0!
Reveille:		Taps:		BMR	66

Meal:	Food		Protein:	Fat:	Carbs:	Fluid Intake
Breakfast:						
Snack:						
Lunch:						
Snack:						
Dinner:						
Snack:						
Pre-						
Post						
Daily Total (Cal):			0	0	0	

Notes:

Nutrition Log

RECOMMENDATION: COPY LOG BOOK PRIOR TO USE



Date:		Resting Heart Rate:		Weight(lb):	
Age:		Height(in):		BMI	#DIV/0!
Reveille:		Taps:		BMR	66

Meal:	Food		Protein:	Fat:	Carbs:	Fluid Intake
Breakfast:						
Snack:						
Lunch:						
Snack:						
Dinner:						
Snack:						
Pre-						
Post						
Daily Total (Cal):			0	0	0	

[illegible]

Nutrition Log

RECOMMENDATION: COPY LOG BOOK PRIOR TO USE

Date:	Resting Heart Rate:	Weight(lb):
Age:	Height(in):	BMI  #DIV/0!
Reveille:	Taps:	BMR  66

Meal:	Food		Protein:	Fat:	Carbs:	Fluid Intake
Breakfast:						
Snack:						
Lunch:						
Snack:						
Dinner:						
Snack:						
Pre-						
Post						
Daily Total (Cal):			0	0	0	

[illegible]

Workout Log

RECOMMENDATION: COPY LOG BOOK PRIOR TO USE

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Workout Log

RECOMMENDATION: COPY LOG BOOK PRIOR TO USE

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Workout Log

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Combat Camera, Camp Johnson