FITNESS TRAINING PROGRAM
FOR VIRGINIA BEACH POLICE OFFICER
CANDIDATES AND INCUMBENTS

Deborah L. Gebhardt, Ph.D.

Submitted By:
Human Performance Systems, Inc.
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Beltsville, Maryland 20705

May 2009

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INTRODUCTION

The job of a police officer requires a certain level of physical fitness. For example, upper body muscle strength is necessary to handcuff a resistive individual or drag a passive offender. Lower body muscle strength and muscle endurance are required to pursue individuals, climb steps, fences, or ladders. Tasks such as pursuing an individual and extracting a person who is resisting arrest from a vehicle also require muscular strength and muscular endurance. However, they utilize the anaerobic system which supplies the energy for short duration tasks. Although most pursuits occur over a short distance (e.g., up to 100 yards), some may require moving over obstacles and arresting a resistive individual. This type of activity has been show to require a moderate level of aerobic capacity (aerobic endurance).

The levels of muscle strength, muscle endurance, and aerobic capacity necessary to perform the physically demanding job tasks safely and efficiently can be attained and maintained through regular participation in a fitness program. The fitness program in this document has been specifically designed to improve your fitness to complete the physically demanding job tasks of a police officer and to improve your ability to perform the components of the Police Officer Test.

Medical Screening

Before you start this fitness program, evaluate your current health. As recommended by the American College of Sports Medicine, men aged 40 or greater and women aged 50 or greater need a medical exam and clearance before starting a fitness program. If you are at risk for heart disease, it is extremely important that you consult your physician before you start a fitness program. Your risk of heart disease increases with high blood pressure, high blood cholesterol, smoking, a sedentary lifestyle, and a family history of diabetes or heart disease. If you have other medical conditions or musculoskeletal injuries, you should seek medical approval before starting the program. If you are a man less than 40 years of age or a woman less than 50 years of age, have a low risk of heart disease, and lead an active lifestyle, you can probably start the program immediately.

Overview of Fitness Program

The fitness program consists of flexibility, strength, anaerobic, and aerobic exercises. The program provides instruction on each of the fitness components. The goal of the program is to provide a fitness plan that can be structured to meet the requirements of most police officers. The exercise prescription outlines individualized routines in the areas of strength, flexibility, and aerobic capacity. The goal of the fitness program is to make exercise a part of your lifestyle.

Self Test and Exercise Prescription

The fitness program consists of self tests to establish the intensity and duration of the initial exercise prescription and the progressions for the remaining weeks of the program. The self tests consist of assessments of aerobic capacity (stair climb), upper body muscular strength (push-ups and chin-ups), and muscular endurance (sit-ups).
GENERAL TRAINING PRINCIPLES

There are three general training principles that should be incorporated into a fitness program. Adherence to these principles will enable you to meet your exercise goals. These principles are overload, specificity, and motivation.

**Overload**
To improve fitness you must increase your physical activity. The exercises performed must be at a level that exceed or overload your current capabilities. To attain an overload you must alter the FIT parameters.

- **F** or frequency of exercise per week (e.g., 3 times per week)
- **I** or intensity of the exercise (e.g., walk a mile in 11 minutes rather than 12 minutes)
- **T** or time spent exercising (e.g., increase the duration of a bicycle ride from 20 to 30 minutes)

One or a combination of the FIT parameters may be increased to overload the body. For example if you wish to increase muscular strength, you can increase exercise intensity by increasing the amount of weight lifted and decreasing the number of times the weight is lifted. To increase aerobic capacity (aerobic fitness) you can increase the time spent performing the activity and/or the frequency of the activity (e.g., running).

**Specificity**
The human body responds to the specific demand placed upon it. To improve performance of police officer tasks involving upper body strength, one must select exercises that use the muscles in the upper body. For example, to effectively train to pull/drag an incapacitated person you need to perform exercises that involve the muscles in the shoulders and upper arms (e.g., deltoid, biceps, and triceps), as well as the back (e.g., erector spinae). Since the body’s response to training is specific, the exercises in your fitness program must place specific demands upon the same physiological systems and muscle groups used to perform police officer tasks.

**Motivation**
To achieve the desired fitness level you must be motivated to participate on a scheduled basis and use the overload principle. Staying motivated is the key to success and can be achieved if you select exercise activities you enjoy. If motivation is a problem (1) set aside a specific time to exercise, (2) vary your program (e.g., use different strength exercises to train the same body parts), (3) keep a record of your progress, and (4) exercise with a partner. It is widely accepted that an exercise partner will encourage improvement and participation.

If you reach a plateau or time period when there is not evidence of improvement, use the motivation tips above to stay motivated. A plateau should not last long if you are applying the FIT principles.

Applying the FIT principles will increase your fitness level. However, remember that some discomfort such as sore muscles and/or breathing heavily will be experienced as you increase the intensity and duration of your exercises. If muscle soreness and/or fatigue occur on a frequent basis, you may take a multiple day rest period. If these signs are persistent, contact a medical professional.
FITNESS TRAINING PROGRAM

Exercise Session Phases

Exercise sessions are defined as each time you participate in some type of training. An exercise session should consist of three phases: (1) warm-up, (2) workout, and (3) cool down. Completion of these three exercise phases will decrease the risk of injury and muscle soreness, and facilitate the performance of job tasks by improving flexibility and other fitness characteristics. The purpose and activities included in each phase are described below, along with a list of precautions to observe before each exercise session.

Warm-Up
The warm-up includes stretching exercises for the arms, legs, and back, along with light aerobic activities (e.g., jogging in place). Warm-up activities increase blood flow and body temperature which prepares the body for exercise and reduces the risk of muscle and joint injuries during the workout.

The stretching exercises improve flexibility. Improved flexibility reduces the risk of muscle soreness and injury after performing physically demanding job tasks. Increased flexibility of lower back and upper leg muscles also helps to alleviate low back pain.

Workout
The workout is the most strenuous phase of the exercise session and includes muscular strength, muscular endurance, flexibility, and aerobic fitness exercises. Muscular strength and endurance is the ability of the muscles to exert force for a single activity (e.g., lift and carry items weighing 30-50 lbs.) or a continuous activity (e.g., physically restrain suspect). Muscular strength and endurance is increased through weight/resistance training. The workout also includes aerobic activities that increase the efficiency of your cardio-respiratory system. These aerobic activities are rhythmical, use large muscle groups, and can be sustained for a given period of time. Aerobic activities include walking, running, stair climbing, swimming, rowing, and bicycling. Workout activities vary with the goals of the fitness program.

If you experience dizziness, nausea, a rapid heart rate, chest pains, or difficulty breathing during the workout, gradually stop all exercise. Notify your exercise partner or a coworker of your condition and seek medical assistance. However, remember that some discomfort will be experienced (e.g., breathing heavily) as you increase the intensity of your exercises.

The physically demanding police officer tasks require moderate to high levels of muscular strength and aerobic fitness. For example, upper and lower body muscular strength and aerobic fitness are required to pursue and handcuff an individual. Other job tasks that require police officers to use muscular strength and endurance include crowd control and use of an expandable baton.

Cool Down
The cool down includes light aerobic activities and stretching exercises. The light aerobic activities precede the stretching to prevent blood from pooling in the arms and legs and reduce the likelihood of dizziness and fainting. The stretching exercises improve flexibility which
reduces the risk of muscle soreness after the workout and after the performance of physically demanding job tasks.

**Precautions Before Exercise**

**Pre-Exercise Dos**
1. Drink small amounts (e.g., 6 ounces or less) of water before, during, and/or after exercise. If the workout exceeds an hour, a sports drink will provide electrolyte replacement.
2. Wear comfortable clothing that does not restrict movement (e.g., sweatpants, T-shirt) and good running, walking or cross training shoes.

**Pre-Exercise Don'ts**
1. Do not eat.
2. Do not smoke.
3. Do not drink alcohol or caffeinated beverages.

Partaking in these items less than one hour before exercise may result in dizziness or nausea and may increase your heart rate.

**Exercise Sessions**

Exercise sessions consist of flexibility, strength, and/or aerobic activities. Each training session should include stretching exercises in the warm-up and cool down phases to improve flexibility.

The workout phase of an exercise session can include strength and/or aerobic components. If an exercise session includes a strength training workout, it should be designed to improve muscle strength in several body areas (e.g., shoulders, thighs). Strength training workouts should be included in the exercise session three times per week on nonconsecutive days (e.g., Monday, Wednesday, and Friday, or Tuesday, Thursday, and Saturday). To avoid injury and enhance strength development, always allow at least 48 hours of rest after each strength training workout.

Exercise sessions that include an aerobic workout are designed to improve cardiovascular endurance and reduce the risk of cardiovascular disease. Aerobic workouts should be included in the exercise session three times per week. The aerobic workout may be completed on the same day as the weight training workout, (before or after weight training) or on a separate day.

General instructions for participation in the warm-up, strength and aerobic training workouts, and the cool down are outlined in the following sections. Detailed instructions for the stretching/flexibility, strength training, and aerobic exercises are located in Appendices A, B, and C.
Designing Your Daily Exercise Program
This fitness program is divided into two types of exercise sessions: (1) strength and flexibility exercises that should be performed 3 days per week and (2) aerobic and flexibility that should be performed 3-5 times per week. The two types of exercises sessions may be completed on the same or alternate days.

The order in which the strength or flexibility exercises are performed is important. The flexibility exercises should be performed in the order listed in Appendix A. Strength exercises should be performed in the order listed, starting with larger muscle groups that involve multi-joint exercises. The weight training recording sheet in Appendix D provides the recommended order for a strength training exercise session. If you elect to perform both strength and aerobic training exercises on the same day, it is suggested that you complete the aerobic exercise activity before completing the strength training exercises. For example, your exercise session may consist of flexibility exercises and light aerobic activities, followed by 10 minutes of stair climbing. The stair climbing would be followed by a strength training workout and a cool down consisting of light aerobic and flexibility exercises.

Follow all of the exercise directions closely and refer to previous sections of the manual for detailed information about flexibility, muscular strength/endurance, and aerobic fitness.

Warm Up Program
Introduction
The warm-up for each exercise session consists of stretching and light aerobic exercises. Follow the "General Directions" listed below to complete the warm-up.

General Directions
1. Find a comfortable spot or matted area.
2. Follow the directions for each flexibility exercise.
3. Make sure you assume the correct start position and slowly move into the stretched position.
4. Hold the stretched position for 5-15 seconds.
5. Do not bounce.
6. Do not hold your breath.
7. When you begin the program hold the stretch for 5-10 seconds. As you progress hold the stretch for 10-15 seconds.
8. Concentrate on feeling the stretch in the muscle groups described for the exercise.
9. Perform the light aerobic activities before or after the stretching exercises.

Precautions
1. Do not stretch recently injured muscles or joints.
2. Do not stretch to a point where you feel pain or the muscle group being stretched begins to quiver.
Warm-Up Exercises
The Warm-Up exercises are listed below. A detailed explanation of each exercise is located in Appendix A.

1. Lower Body Light Aerobic Exercise - walk briskly or jog in place for 1-2 minutes.
2. Quadriceps Stretch
3. Hamstring Stretch
4. Calf Stretch
5. Side Bend
6. Arm Cross

Weight Training Workout

Introduction
Weight or resistance training is one of the best methods to develop muscular strength. Your initial weight training workouts will be used to determine the amount of weight to lift for each exercise. To determine the weight to use for each weight training exercise follow the instructions listed below. Remember that it is better to use lower weights in the beginning and gradually build to heavier weights. The weight training instructions provide guidance related increasing the exercise weight and the number of repetitions. The following instructions provide tips for performing each exercise correctly and will assist in determining whether the weight should be increased. The "General Directions" outline how to perform the weight training exercises. The guidelines for determining the amount of weight to lift and how to safely increase the weight lifted are described in “Starting Level Determination”.

General Directions

1. Weight training may produce calluses on the hands. Wearing weight lifting gloves will reduce calluses and help you maintain a firm grip on the bar. You also may elect to wear a weight lifting belt to support your back and abdominal area.

2. Make sure to assume the correct starting position and lift and lower the weight as outlined.

3. If you use an Olympic bar with adjustable weight plates or adjustable dumbbells, attach collars to each end of the bar to secure the plates.

4. Lift and lower the weights with slow controlled movements. Take 1-2 seconds to lift the weight and 2-3 seconds to lower it.

5. DO NOT hold your breath during any phase of the exercise. Exhale as you lift and inhale as you lower the weight.

6. Complete 8-12 repetitions of each exercise then rest for 45-60 seconds. This series of repetitions is called a set.

7. Complete 3 sets of each exercise with a 45-60 second rest between each set. When you first begin the program, you may only be able to complete 2 sets, but the goal is to work until you can complete 3 sets at a specific weight.
8. To decrease the risk of injury, perform each weight exercise as outlined in the directions in Appendix B.

9. After completing the weight training workout, perform the cool down light aerobic exercises followed by the stretching exercises.

**Starting Level Determination**

When using weights in an exercise follow the steps listed below to determine the weight to use that is appropriate with your fitness level. Then, perform the exercise as listed in the instructions (Appendix B). If a weight training exercise does not involve a weight, perform it as listed in the instructions.

1. Choose a weight that feels comfortable to complete one repetition of the exercise as it is listed in the instructions. If you are unable to complete one repetition using proper form with the selected weight, the weight is too heavy. Choose a lighter weight and move to step 2.

2. Perform 10 repetitions with the weight.

3. If you cannot complete 10 repetitions, drop down to the next lower weight (e.g., 20 lbs. to 15 lbs.).

4. If you complete 10 repetitions with the weight, choose a heavier weight (e.g., 12 lbs. to 15 lbs.).

5. Rest 30 to 45 seconds and attempt to perform 10 repetitions with the heavier weight. If you are unable to perform 10 repetitions, this is your starting point.

6. Example for choosing the correct starting weight for bicep curls using dumbbells.
   a. If adjustable dumbbells are used, place the weight plates (e.g., 2.5 lbs.) on each end of the bar and lock them in place with a clip or collar. Remember, that the bar weight is approximately 4 to 5 lbs. If unit weighted dumbbells are used, select the weight you think you can curl (e.g., 5, 10, 12, 15, 20, 30 lbs.).
   b. Stand in an erect position with the knees slightly flexed and perform the curling motion. If it is a struggle to complete one curl remove weight from the dumbbell or select a lighter dumbbell (e.g., 20 lbs. to 15 lbs.).
   c. If it was very easy to perform one repetition, increase the weight (e.g., 15 lbs. to 20 lbs.).
   d. Perform 10 repetitions with the adjusted (lower or higher) weight level.
      1) If you are unable to perform one repetition using the proper form, reduce the weight a second time.
      2) If you can perform two or more repetitions but are unable to perform 10 repetitions (e.g., 7 completed), this is your starting weight.
      3) If you can easily perform 10 repetitions using the proper form, increase the weight a second time and repeat this process. When able to complete less than 10 repetitions using the proper form, this is the starting weight.
Performing Weight Training Session
After determining the starting weight for each weight training exercise, begin the weight training session. The goal is to perform three sets of each weight training exercise. For example, if you are performing arm curls, attempt to complete 8-12 repetitions in the first set, rest 45-60 seconds and complete the second set of 8-12 repetitions. This is followed by a second rest period and the third set of 8-12 repetitions. It is normal to be unable to complete 8-12 repetitions for each set. However, it is important to complete the three sets. When you can comfortably complete three sets, increase the weight as outlined in steps 2-5 above. Use this procedure each time you need to increase the weight.

Precautions
1. If you have high blood pressure or other cardiovascular problems, obtain medical clearance from your physician before starting the weight training program.
2. Complete the exercises that use large muscle groups first (e.g., bench press, lunges). Next perform the exercises that use smaller muscle groups (e.g., curls, toe raises).
3. Complete the full range of motion for each exercise, but DO NOT lock the joints (e.g., elbows, knees) when the exercising limbs are in the extended position.

Weight Training Exercises
The primary weight training exercises are listed below and explained in Appendix B. Alternate exercises can be added to the program after 3-6 weeks depending upon your improvement. All exercises use dumbbells, but barbells or an Olympic bar may be used for the exercises marked with an asterisk (*). Some exercises use only your body weight (e.g., push-ups). Follow the directions in Appendix B for each exercise.

1. Chest (Bench) Press*
2. Chest Fly
3. Leg Press
4. Dumbbell Pullover
5. Bent-Over Row*
6. Shoulder (Military) Press*
7. Lateral Raise
8. Biceps Curl*
9. Triceps Extension (Kickbacks)
10. Push-Ups
11. Toe Raises
12. Crunches

Recording Your Progress
A progress recording form is located in Appendix D. The form provides spaces to record the weight and the number of repetitions completed for each set within an exercise. This form allows for four weeks of exercise. To continue recording after the four week period, photocopy a blank form.
Aerobic Workout

Introduction
Cardiovascular fitness can be improved by regular participation in aerobic activities. The "General Directions" and Precautions for aerobic workouts are listed below. Guidelines for increasing the frequency, intensity, and time of aerobic workouts are located in Appendix C along with record keeping information.

General Directions
1. Select an activity that you enjoy and that uses the large muscle groups (e.g., legs) for greater than 10 minutes. Examples of aerobic activities include walking briskly, running, bicycling, and swimming.

2. If running or walking, invest in the appropriate shoes for weight bearing activities (e.g., running, walking).

3. Complete the warm-up exercises before the aerobic workout. If both aerobic and weight training are performed in the same session, complete the aerobic training first. Further, the warm-up exercises only need to be perform one time in a session if aerobic and weight training are completed.

4. Start the workout slowly and continue the activity for at least 15 minutes without stopping. Your workout time will vary with your fitness level. If your current aerobic fitness is low, your initial duration may be 10 minutes.

5. Exercise at a pace or intensity that allows you to carry on a normal conversation without gasping for air. This pace should produce a heart rate within 5 beats of the training heart rate. Training heart rate is the number of times your heart beats per minute when performing aerobic exercise. The number of beats per minute indicates your exercise intensity. To calculate your training heart rate, refer to the next section Training Heart Rate Calculation.

6. After completing the aerobic workout perform the cool down light aerobic activities followed by the stretching exercises found in the “Warm-up” section.

Training Heart Rate Calculation
1. Locate your pulse at the wrist or the neck.
   a. Wrist: With your left palm facing upward, place two fingers from your right hand on the thumb side of the wrist. If you have difficulty finding the pulse, move the finger tips down and toward the edge of your arm (thumb side).
   b. Neck: Place two fingers on one side of the neck and the thumb on your voice box. Slide your hand up to a position just below the jaw line. Lightly press with the fingers to feel the carotid pulse.

2. Determine your resting heart rate by sitting quietly for 15 minutes. Then count your heart rate for 60 seconds. Write this heart rate on a sheet of paper.

3. Complete the following blanks to determine the maximum heart rate.
   a. Record 220 for a man or 230 for a woman.
   b. Record your age.
   c. Subtract a from b (a-b=c)
This is your **maximum heart rate**.

d. Record your **resting heart rate**. 

e. Subtract your resting heart rate (d) from your maximum heart rate (c) to determine your **base heart rate**. 

4. Determine the upper and lower limits of your training heart rate zone.

*Lower Limit* is 60% of your maximum heart rate.

a. Record your **base heart rate**

b. Multiple your base heart rate by 60% (base heart rate X 0.60).

*Upper Limit* is 85% of your maximum heart rate.

c. Record your **base heart rate**

d. Multiple your base heart rate by 85% (base heart rate X 0.85).

5. Identify your training heart rate (THR) for the upper and lower limits.

*Lower Limit* = 60%.

a. Add your resting heart rate from 3d above to the lower limit value in 4b above (3d + 4b=lower limit training heart rate).

*Upper Limit* = 85%.

b. Add your resting heart rate from 3d above to the lower limit value in 4d above (3d + 4d=upper limit training heart rate).

When performing aerobic exercises, your heart rate should be between your upper and lower limits as defined in number 5 “a” and “b”. To increase aerobic capacity, the heart rate should be closer to, but not greater than the upper limit.

**Precautions**

1. Monitor your exercise intensity to avoid overexertion, particularly if you exercise outside in hot, humid weather. If at any time you feel lightheaded, dizzy, or nauseous, slow down and then stop all exercise. Inform your exercise partner how you feel.

2. To avoid dehydration, drink small amounts of water before, during, and/or after aerobic workouts.
Aerobic Exercises
Several examples of aerobic exercises are listed below. Descriptions of a stair climbing and, jogging/running programs are located in Appendix C. These programs were selected because they do not require special equipment and are known to be effective in making aerobic gains in a relatively short period of training.

1. Brisk walking
2. Jogging/running
3. Cycling
4. Stair climbing
5. Elliptical training
6. Nordic Track
7. Swimming

Cool Down Program

Introduction
The cool down consists of the light aerobic activities and stretching exercises, as performed in the warm-up. The light aerobic activities must be completed first to gradually bring the heart rate down to normal levels. Follow the "General Directions" listed below to complete the cool down.

General Directions
1. For all flexibility exercises assume the correct start position and slowly move into the stretched position.
2. Hold the stretched position for 5-15 seconds. Do not bounce. Do not hold your breath. When you begin the program hold the stretch for 5-10 seconds. As you progress hold the stretch for 10-15 seconds.
3. Concentrate on feeling the stretch in the muscle groups described for the exercise.

Precautions
1. Do not stretch recently injured muscles or joints.
2. Do not stretch to a point where you feel pain or the muscle group being stretched begins to quiver.

Cool Down Exercises
Follow the directions for each exercise. Cool down exercises are listed below and explained in Appendix A.

1. Lower Body Light Aerobic Exercise - walk briskly or jog in place for 1-2 minutes.
2. Quadriceps Stretch
3. Hamstring Stretch
4. Calf Stretch
5. Side Bend
6. Arm Cross
7. Single Knee Tuck
APPENDIX A:
WARM-UP AND COOL-DOWN EXERCISES
Warm-up

Warm-Up exercises are prescribed to prepare your muscles and joints for exercise. Repeat each exercise *twice* for each arm and leg.

1. Lower Body Light Aerobic Exercise - walk briskly or jog in place for 1-2 minutes.
2. Quadriceps Stretch
3. Hamstring Stretch
4. Calf Stretch
5. Side Bend
6. Arm Cross

Cool Down

Cool down exercises are prescribed to develop flexibility. Repeat each exercise *three times* for each arm and leg.

1. Lower Body Light Aerobic Exercise - walk briskly or jog in place for 1-2 minutes.
2. Quadriceps Stretch
3. Hamstring Stretch
4. Calf Stretch
5. Side Bend
6. Arm Cross
7. Single Knee Tuck

Light Aerobic Exercise (Lower Body)

**Jogging**

Jog in place or around a room for 1-2 minutes. Lift the knees during each step. Make sure that your heart rate increases.

**Brisk Walking**

Walk quickly around a known area for 1-2 minutes. Make sure that your heart rate increases.
**Quadriceps Stretch**

**Starting Position**
Stand erect with the feet shoulder-width apart.

Grasp a stable surface (e.g., chair, table) with the right hand.

**Movement**
Flex the knee of the right leg and then the right foot behind you with the left hand.

*Slowly and gently pull the right heel upward toward the buttocks as you move the bent leg back. The heel does not need to touch the buttocks.*

Only go as far as is comfortable.

**Hold**
Hold the stretched position for 10-20 seconds. *Feel the stretch in the quadriceps/front of thigh and across the hip joint.* If not, continue to gently pull the bent leg back.

**Repetitions**
Repeat the exercise 2-3 times for each leg.

---

Figure 1: Quadriceps Stretch
**Hamstring Stretch**

**Starting Position**
Sit on the floor with your legs together. The knees should be slightly flexed.
Feet should be perpendicular to the floor with the toes pointed upward.

**Movement**
Slowly reach forward toward the ankles, while keeping the back flat and knees slightly bent. Grasp the toes and move the chest toward the knees.
Keep the head up, the back flat and the toes pointed upward and attempt to slowly straighten the knees.
Only go as far in the knee extension as is comfortable.

**Hold**
Hold the stretched position for 10-20 seconds. Feel the stretch in the hamstrings. If not, check to see that you are not rounding the back and are attempting to straighten the knees (Figure 2).

**Repetitions**
Repeat the exercise 2-3 times for each leg.

**Variation**
One leg at a time (Figure 3: Single Leg). Assume sitting position, place sole of right foot on inner side of left knee. Perform the movement and the hold as described above.

![Figure 2. Hamstring Stretch.](image)

![Figure 3: Hamstring Stretch Alternate Position – Single Leg](image)
**Calf Stretch**

**Starting Position**
Stand facing the wall at approximately arms length away.

Place the hands on the wall at shoulder height.

Step back with the one leg, keeping it straight but allowing the knee of the other leg to flex.

Keep both heels on the floor and both feet pointed directly towards the wall. (Figure 4)

**Movement**
Flex the knee of the forward leg and slowly lean to the wall.

Continue to lean forward until you feel a stretch in the calf.

**Hold**
Hold this position for 10-20 seconds. *Feel the stretch in the Achilles tendon and calf*. If not, be sure that the toes are pointing directly towards the wall. You may also lean further into the wall to obtain a stretch.

**Repetitions**
Repeat the exercise 2-3 times for each leg.

![Figure 4. Calf Stretch.](image)
**Side Bend with Straight Arms**

**Starting Position**
Stand with feet approximately shoulder distance apart, knees slightly bent (Figure 5).

**Movement**
Reach arms overhead with palms facing out. Keeping arms straight, lean from waist to one side, reaching with both arms.

*Keep the head facing forward.*

Only go as far in side bend as is comfortable.

**Hold**
Hold the stretched position for 10-20 seconds. Feel the stretch in the muscles on the side of the torso and back.

**Repetitions**
Repeat the exercise 2-3 times for each side.

---

**Figure 5: Side Bend with Straight Arms**

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Single Arm Cross

Start Position
Stand erect with the feet shoulder width apart.

Place the left arm in front of the body at shoulder height, elbow straight, palm down.

Movement
Grasp the left elbow with the right hand.

Slowly pull the left arm across the body towards the right shoulder. Keep the left arm straight and the palm down.

Keep both shoulders facing forward.

Do not twist the trunk.

Hold
Hold this position for 5-15 seconds. Feel the stretch in the shoulder and upper back.

Repetitions
Repeat the movement 2-3 times per arm.

Figure 6: Single Arm Cross Over
Single Knee Tuck

Starting Position
Lie on the back with the legs straight, feet together, and arms at your sides.

Movement
Flex one leg, grasp it at the knee and slowly pull it in towards the chest with both arms. Be sure to keep the lower back flat against the floor.

Keep the other leg straight and on the floor.

Hold
Hold the bent knee at the chest for 10-20 seconds. Feel the stretch in the hamstrings and gluteals. If not, pull the knee closer to the chest and check the position of the straight leg. The straight leg should remain on the floor from the hip to the foot.

Repetitions
Repeat the exercise 2-3 times for each leg.

Figure 7: Single Knee Tuck
APPENDIX B:
WEIGHT TRAINING EXERCISES
Chest (Bench) Press

Start
Lie back on the bench in a position where the bar is directly above your chin.

Reach up and grasp the bar with the hands slightly wider than shoulder width.

Place your feet flat on the ground, one on each side of the bench, or both feet on the bench.

Remove the bar from the racks and hold it directly above the shoulders.

Lower
Slowly lower the bar until it reaches a point just above the chest.

Inhale as you lower the weight.

Lift
Slowly press the bar up until your arms are straight. Do not lock the elbows as the arms become straight.

Exhale as you lift the weight.

Keep the lower back flat on the bench throughout the exercise.

Repetitions
Complete 8-12 repetitions and 2-3 sets with a one minute rest period between sets.

Note: if you are unable to bench press 45 pounds, that is the weight of the Olympic bar, use dumbbells for this exercise.

![Figure 8: Chest Press](image)
**Chest (Dumbbell) Fly**

**Start**
Sit on the bench holding a dumbbell in each hand with an overhand grip (i.e., palms down).

Place your feet flat on the ground, one on each side of the bench, or both feet on the bench.

Flex the arms at the elbows, placing the dumbbells at your shoulders, and lie back on the bench.

Straighten the arms and hold the dumbbells above the chest with the palms together.

**Lower**
With the elbows slightly bent, slowly lower the arms out to the sides until you feel a stretch across your chest.

Inhale as you lower the weight.

**Lift**
Keeping your elbows slightly bent, slowly lift the dumbbells as if you were hugging a large tree.

Exhale as you lift the weight.

Keep your lower back flat on the bench.

**Repetitions**
Complete 8-12 repetitions and 2-3 sets with a one minute rest period between sets.
**Leg Press**

**Start**
Using a leg press machine, adjust the seat until the knees are flexed to 90 degrees.

Place the hands on the side handles and feet on the footrests.

**Lift**
Slowly extend the legs fully. Do not lock the knees as the legs become extended.

Exhale as you extend your legs.

**Lower**
Slowly flex your knees, returning the weight to the starting position.

Inhale as you flex your legs.

**Repetitions**
Complete 8-12 repetitions and 2-3 sets with a one minute rest period between sets.

Figure 10: Leg Press
**Dumbbell Pullover**

**Start**
Sit on the bench holding one dumbbell in both hands.

Flex both knees and place your feet on the bench.

Flex the arms at the elbows and lie back on the bench with your head on the bench.

Raise the dumbbell up, over and behind the head, towards the floor.

Keep the elbows slightly bent while holding the dumbbell in this starting position.

**Lift**
Keeping the elbows slightly bent, slowly lift the dumbbell up over the head and chest so it is above the abdomen.

Exhale as you lift the weight.

Keep your lower back flat on the bench.

**Lower**
With the elbows slightly bent, slowly lower the dumbbell back over the chest and head until it nearly touches the floor.

Inhale as you lower the weight.

**Repetitions**
Complete 8-12 repetitions and 2-3 sets with a one minute rest period between sets.

---

Figure 11: Dumbbell Pullover
**Bent-Over Rows**

**Start**
Bend over and place the left knee and hand on a bench. Keep the back flat from the buttocks to the shoulders.

Grasp a dumbbell in the right hand with an overhand grip (i.e., palm down).

**Lift**
Slowly pull the dumbbell straight up towards the shoulder by flexing at the elbow.

Keep the back flat.

Exhale as you lift the weight.

**Lower**
Slowly lower the dumbbell almost to the floor by straightening the arm. Do not lock the elbow as the arm becomes straight.

Inhale as you lower the weight.

**Repetitions**
After completing 8-12 repetitions, one set, with the right arm, complete the second set with the left arm, then complete the next set with the right arm, etc.

For each arm, complete 8-12 repetitions and 2-3 sets with a one minute rest period between sets.
Shoulder (Military) Press

Start
Sit erect in a straight back chair with the knees bent and the feet flat on the floor.

Grasp one dumbbell in each hand with an overhand grip (palms down) OR grasp the weighted barbell, which is resting on your knees, with an overhand grip.

Flex at the elbows to place the dumbbells/barbell just outside the shoulders at shoulder height. Use a spotter if needed.

Lift
Slowly press the dumbbells/barbell overhead by straightening the arms. Do not lock the elbows as the arms become nearly straight.

Do not arch the lower back. Keep the low backer pressed flat against the back of the chair.

Exhale as you lift the weight.

Lower
Slowly flex the elbows to return the dumbbells/barbell to the starting position, just outside the shoulders at shoulder level.

Inhale as you lower the weight.

Repetitions
Complete 8-12 repetitions and 2-3 sets with a one minute rest period between sets.

Figure 13: Shoulder Press
Lateral Raise

Start
Sit erect in a straight back chair with the knees bent and the feet flat on the floor.

Grasp a dumbbell in each hand with an overhand grip (i.e., palms down) and let the arms hang down at your sides with your palms towards your body.

Lift
Keeping the elbows slightly flexed, slowly raise the dumbbells up and out to your sides to a position where the upper arms are parallel to the floor.

Do not arch the lower back. Keep the lower back pressed flat against the back of the chair.

Exhale as you lift the weight.

Lower
Keeping the elbows slightly bent, slowly return the dumbbells to your sides.

Inhale as you lower the weight.

Repetitions
Complete 8-12 repetitions and 2-3 sets with a one minute rest period between sets.

Figure 14: Lateral Raise
**Biceps Curl**

**Start**
Grasp a dumbbell in each hand with an underhand grip (i.e., palms up).

Stand with the feet flat on the floor, shoulder width apart, and the arms hanging down at your sides, palms forward.

**Lift**
Keeping the upper arms at you sides, slowly flex the elbows to lift the dumbbells up to the shoulders.

Do not arch the lower back. Keep the lower back flat.

Do not rest the elbows on the hips as you lift the weight.

Exhale as you lift the weight.

**Lower**
Slowly return the dumbbells to your sides by straightening the arms. Do not lock the elbows as the arms straighten.

Keep the upper body erect and do not allow it to sway back and forth as you lift and lower the weight.

Inhale as you lower the weight.

**Repetitions**
Complete 8-12 repetitions and 2-3 sets with a one minute rest period between sets.

Figure 15: Biceps Curl
Triceps Extension (Kickbacks)

Start
Bend over and place the left knee and hand on a bench. Keep the back flat from the buttocks to the shoulders.

Grasp a dumbbell in the right hand with an overhand grip (i.e., palm down).

Move the right arm to a position where the upper arm is parallel to the floor and the lower arm is perpendicular to the floor (i.e., 90 degrees at the elbow).

Lift
Keeping the upper arm parallel with the floor, slowly straighten the right arm until the right elbow is just slightly bent. Do not lock the elbow.

Keep your back flat.

Exhale as you lift the weight.

Lower
Slowly lower the dumbbell by flexing the elbow until it returns to the start position of 90 degrees.

Inhale as you lower the weight.

Repetitions
After completing 8-12 repetitions, one set, with the right arm, complete the second set with the left arm, then complete the next set with the right arm, etc.

Period between sets.

Figure 16: Triceps Extension (Kickback)
**Push-Ups**

**Start**
Get into a standard push-up position with the feet and palms on the floor and the arms straight. The body should form a straight line from the heels to the shoulders. (Note: If needed, a modified push-up position may be used, that is with the knees and hands on the floor).

Place the hands a little wider than shoulder width.

**Lower**
Keeping you’re the torso straight, lower the body to within 4 inches of the floor by flexing the elbows.

Inhale as you lower the body.

**Lift**
Lift the body by extending the elbows until the arms are straight. Do not lock the elbows.

Exhale as you lift the body.

**Repetitions**
Complete 8-12 repetitions and 2-3 sets with a one minute rest period between sets.

---

Figure 17: Push Ups
**Toe Raises**

**Start**
Stand erect on a 2-inch high surface (e.g., a board) with the feet parallel and shoulder width apart.

The heels should be hanging over the back of the board.

Use an overhand grip (i.e., palms down) to hold a dumbbell in each hand.

**Lift**
Extend up on the ball of the foot as far as possible.

Exhale as you extend the ankles.

**Lower**
Lower the body so that the heels are below the top edge of the board.

As you extend the ankles and lower the body keep the knees slightly bent, but do not bend and straighten the knees to perform the exercise.

Inhale as you lower your body.

**Repetitions**
Complete 8-12 repetitions and 2-3 sets with a one minute rest period between sets.

---

Figure 18: Toe Raises
**Crunches**

**Start**
Lie on the back with the knees bent and the low back and feet flat on the floor.

Cross the arms across the chest, placing a hand on each shoulder. (Note: for an easier exercise keep the arms and hands at the sides.)

Tuck the chin up to the chest.

**Lift**
Slowly curl up by tightening the abdominal muscles to lift the shoulder blades up off the floor. Do not do a full sit-up, curl up only to a point where the shoulder blades come off the floor.

Keep the chin tucked to the chest.

Exhale as you curl up.

For an easier version of this exercise, slide the arms forward just a few inches to lift only the shoulders slightly off the floor.

**Lower**
Slowly uncurl to return the shoulders/shoulder blades to the floor.

Inhale as your uncurl.

**Repetitions**
Start with 8-12 repetitions per set and work towards 30 - 35 repetitions per set. Complete 2-3 sets with a one minute rest period between sets.

Figure 19: Crunches
APPENDIX C: AEROBIC TRAINING PROGRAMS
AEROBIC TRAINING PROGRAMS

Determining a Starting Level

The starting level for each aerobic program will depend on your current level of aerobic fitness. Two aerobic programs are presented in this manual: jog/run and stair climbing. Other activities such as bicycling, swimming, or rowing may also be used. To increase your aerobic fitness you should participate in one of these programs three to five days per week for at least 30 to 45 minutes at your training heart rate (THR) on page 13.

Jog/Run Program

The jog/run program involves jogging (slow run) and running. The program is divided into 21 levels of increasing difficulty. For each level, the distance to be covered (e.g., jogged), the time to complete the distance, and the pace per mile are listed. The levels for the jog/run program are listed in Table 1. To determine your starting level go to a track and attempt to complete 1.5 miles. You may walk, jog, or run. Remember to monitor your heart rate and fatigue level during this pre test. If you are unable to walk 1.5 miles, begin by walking for 10 minutes at your own pace. This can include stopping for rest periods. Continue to increase the time until you can walk continuously for 15 minutes. Once you can walk continuously for 15 minutes go to the Table 1 below and start at Level 1.

If you can walk, jog, or run 1.5 miles, refer to the guidelines shown in the left hand column of Table 1. For example, if you completed the 1.5 mile Self-Test in 28 minutes, you should start at Level 1. However, if you completed the 1.5 mile Self-Test in less than 22 minutes, you may start at level 6.

If you start at Level 6, you should already be able to jog (1) mile in 14:00 (14 minutes). When you jog the mile you should check your heart rate after 10 minutes to ensure that you are within 5 beats of your THR. If your heart rate is exceeding your THR slow down. If your heart rate is below your THR walk faster.

The goal at each level is to complete the distance in the time specified at the appropriate intensity. That is, your heart rate should remain within ± 5 beats of your THR. When you accomplish this goal for three consecutive exercise sessions, you may move to a higher level.

Safety Tips

1. Walk/jog/run with someone who runs at your pace.
2. Walk/jog/run in a residential area on a paved shoulder rather than on the pavement, obey traffic lights and signs and watch for cars and potholes.
3. Walk/jog/run on a track, street, or treadmill to alternate your courses for safety and variety.
4. Avoid running in the same direction on sloped or banked surfaces for an extended period of time.
Table 1: Jogging/Running Program

### Jogging Goals

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<thead>
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<th>Starting Level - 1.5 Mile Finish Time</th>
<th>Level</th>
<th>Distance Covered (mile)</th>
<th>Time to Complete (min:sec)</th>
<th>Pace (min/mile)</th>
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</thead>
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<td>16:00</td>
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<tr>
<td></td>
<td>2</td>
<td>1-1/4</td>
<td>19:00</td>
<td>15:20</td>
</tr>
<tr>
<td>24 Minutes</td>
<td>3</td>
<td>1-1/2</td>
<td>22:00</td>
<td>14:40</td>
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<td></td>
<td>4</td>
<td>1-3/4</td>
<td>25:00</td>
<td>14:17</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>2</td>
<td>28:00</td>
<td>14:00</td>
</tr>
<tr>
<td>&lt; 22 Minutes</td>
<td>6</td>
<td>2-1/2</td>
<td>36:00</td>
<td>14:24</td>
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### Jogging/Running Goals

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<th>Pace (min/mile)</th>
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<tr>
<td></td>
<td></td>
<td>Run ¼</td>
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</tr>
<tr>
<td></td>
<td>Total</td>
<td>2</td>
<td>27:00</td>
</tr>
<tr>
<td>8</td>
<td>Repeat 2 Times</td>
<td>Jog ½</td>
<td>7:30</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Run ½</td>
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</tr>
<tr>
<td></td>
<td>Total</td>
<td>2</td>
<td>27:00</td>
</tr>
<tr>
<td>9</td>
<td>Repeat 2 Times</td>
<td>Jog ¼</td>
<td>3:45</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Run ¾</td>
<td>9:00</td>
</tr>
<tr>
<td></td>
<td>Total</td>
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### Jogging/Running Goals

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<th>Repeat Times</th>
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<th>Pace (min/mile)</th>
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<td>15:00, 12:00</td>
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<td></td>
<td>Total 3</td>
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</tr>
<tr>
<td>11</td>
<td>1 Time</td>
<td>Run 1</td>
<td>12:00</td>
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<tr>
<td></td>
<td></td>
<td>Jog ¼, Run ½, Jog ½</td>
<td>3:45, 6:00, 7:30</td>
<td>15:00, 12:00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total 2 ¼</td>
<td>29:15</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>2 Times</td>
<td>Run 1</td>
<td>12:00</td>
<td>12:00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Jog ¼</td>
<td>3:45</td>
<td>15:00</td>
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<tr>
<td></td>
<td></td>
<td>Total 2 ½</td>
<td>31:30</td>
<td></td>
</tr>
<tr>
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<td>2 Times</td>
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<td>15:00, 11:30</td>
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<tr>
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<td></td>
<td>Total 2 ½</td>
<td>30:30</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>3 Times</td>
<td>Jog ¼, Run 1</td>
<td>3:45, 11:30</td>
<td>15:00, 11:30</td>
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<tr>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Total</td>
<td>3</td>
<td>34:00</td>
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<tr>
<td>17</td>
<td>Repeat 1 Time</td>
<td>3</td>
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</tr>
<tr>
<td></td>
<td>Total</td>
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<td>31:00</td>
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<tr>
<td>19</td>
<td>Repeat 1 Time</td>
<td>3</td>
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<tr>
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<td>30:00</td>
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<tr>
<td>20</td>
<td>Repeat 1 Time</td>
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<td>9:15</td>
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<tr>
<td>21</td>
<td>Repeat 1 Time</td>
<td>3</td>
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<tr>
<td></td>
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Stair Climbing Program

The stair climbing program involves walking up and down stairs at a normal pace. To begin the program, locate a set of stairs that has a handrail. You may use one long flight of stairs (13-15 steps) or a set of stairs with two flights of stairs between floors (6-8 steps per flight). Make sure the stairs are well lit to prevent risk of injury.

To determine your starting level in the stair climbing program follow the instructions listed below. To safely participate in the stair climbing program walk at a normal pace. A stop watch or watch that records seconds is needed to monitor your progress in the stair climbing program.

Stair Climbing: Determination of Your Starting Level

1. Determine number of flights per floor where you intend to climb stairs and record number here (A) _________(A)
2. Record your training heart rate (THR) from page 13 _________(B)
3. Start at the bottom of the stairs. Start the stop watch as soon as you begin to walk up the stairs at a normal pace. Stop the watch as soon as you reach the top of the stairs. Immediately take your pulse for 6 seconds and add a zero to determine a per minute value. If your pulse is less than your calculated THR (B), start the stop watch and walk down and then immediately back up the stairs. Stop the watch when you reach the top of the stairs. Take your pulse for 6 seconds, add a zero, and compare it to your THR (B). Continue to walk down and up the stairs until your pulse at the top of the stairs is within ±5 beats of your THR (B).
4. Record total number of floors ascended to get within 5 beats of your THR. _________(C)
5. Record the total time (min:sec) (D) taken to walk up and down the stairs, excluding the time taken to count the pulse. Place this time here (D). Do not include pulse counting time in climbing time. For example, if it took you 3 minutes and 15 seconds to climb the stairs 6 times record 3:15 in (D). _________(D)
6. Determine start level using Table 2.
   a. Locate the number of floors climbed at the top of the page on the horizontal scale labeled "Number of Floors".
   b. Go down that column to the first entry (i.e., "x"), then go over to the left to locate start level on the vertical scale labeled "Level". For example, if you climbed 6 floors you would locate "6" at the top of Table 1. Next draw a line straight down until you see an "X". Then draw a line to the left and read the level. For 6 floors the level is "4".
7. Record your start level here (E).

8. Determine the number of sets of stairs to be completed at that level to achieve a 10 minute stair climbing goal for first 3 weeks of your program. The number of sets (F) required is 10 minutes divided by time (D) taken to climb up and down (10 minutes/(D) = (F)).

For example, if it took you 3 minutes and 15 seconds (3:15) to climb 6 floors of stairs, you will need to complete 3 sets to equal 10 minutes. You can calculate this by converting the minutes to seconds. This is done by multiplying the minutes by 60.

For the first 3 weeks of the program, you must complete "F" sets at your starting level with a one minute rest between sets. The approximate time should be 10 minutes of stair climbing. Prior to moving to a new level, you should complete your current level successfully for three sessions.

Check the intensity of your exercise at least once during each set of stair climbing by taking your heart rate and comparing it to your THR. Make adjustments to your pace if necessary (e.g., increase if your heart rate is below THR) and recheck your exercise intensity.

If you are unable to successfully meet either the duration or intensity (i.e., THR) goals at a certain level, stay at that level until you successfully complete it for three consecutive exercise sessions.

The intensity of stair climbing can be increased by working at a higher THR. Begin by working at the 60% level and as your ability increases move up and down the stairs at a faster pace. This will increase your heart rate to a point closer to the 75% THR. Remember you do not want to allow your heart rate to be greater than the 75% THR. After completing the first three weeks of stair climbing, progress to 15 or 20 minutes duration. This will require increasing the number of stair climbing. This should occur naturally as you progress from your starting level to each higher level.

As your aerobic fitness improves, the number of floors you climb, the time you spend climbing, and the intensity of your climbing will be increased. These changes will place a continual overload on your cardiorespiratory systems resulting in improved aerobic fitness. At any point after the first three weeks in which you completed three stair climbing sessions, you may re-evaluate your level as described above.

If you successfully complete Level 15 for 30 minutes with a 75% THR, you may continue to increase only the duration, not the intensity of your exercise. Your THR should not exceed 75%.

GOAL: complete 20 - 25 minutes of stair climbing 3 times per week.

REMEMBER:

- Walk up and down continuously.
- Monitor and adjust your exercise intensity.
- Slow down and stop if you begin to feel dizzy or lightheaded.
Table 2: Stair Climbing Exercise

| Level | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 |
|-------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
|       | X | X |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 2     | X | X | X |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 3     | X | X | X | X |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 4     | X | X | X | X | X |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 5     | X | X | X | X | X | X |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 6     | X | X | X | X | X | X | X |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 7     | X | X | X | X | X | X | X | X |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 8     | X | X | X | X | X | X | X | X | X |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 9     | X | X | X | X | X | X | X | X | X | X |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 10    | X | X | X | X | X | X | X | X | X | X | X |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 11    | X | X | X | X | X | X | X | X | X | X | X | X |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 12    | X | X | X | X | X | X | X | X | X | X | X | X | X |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 13    | X | X | X | X | X | X | X | X | X | X | X | X | X | X |    |    |    |    |    |    |    |    |    |    |    |    |
| 14    | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |    |    |    |    |    |    |    |    |    |    |    |
| 15    | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |    |    |    |    |    |    |    |    |    |    |
| 16    | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |    |    |    |    |    |    |    |    |    |
| 17    | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |    |    |    |    |    |    |    |    |
| 18    | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |    |    |    |    |    |    |    |
| 19    | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |    |    |    |    |    |    |
| 20    | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |    |    |    |    |    |
| 21    | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |    |    |    |    |
| 22    | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |    |    |    |
| 23    | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |    |    |
| 24    | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |    |
| 25    | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
APPENDIX D:
WEIGHT TRAINING WORKOUT RECORD
## Weight Training Workout Record

Date: ______

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