

## **GENERAL FITNESS ASSESSMENT DESCRIPTION**

The goal of the general Fitness Assessment is to provide a simple, safe, and standardized approach to assessing the major components of fitness in apparently healthy individuals and to interpret these assessments based on norms and percentiles for Canadians 15 to 69 years of age.

### **HEART RATE, < 100/min**

In order to start the test, the participant's resting heart rate must be below 100 beats/min. Resting heart rate is taken after 5 minutes of quiet sitting with feet flat on the floor. If the reading is greater than 100 beats/min, the participant will sit for an additional 5 minutes before the reading is taken again. Should the second reading be greater than 100 beats/min, the participant will not be allowed to take part in any aspect of the Fitness Assessment. Resting Heart Rate reflects the rate that the heart must pump to supply oxygen to the tissues. Thus, an elevated value suggests that the heart is working excessively hard to provide basic requirements.

*If you suspect this may be a problem, you are advised to obtain clearance from a doctor before coming for the test.*

### **BLOOD PRESSURE, <144/94**

Blood pressure will be taken at the start of the assessment and must be below 144/94 to proceed with the test. If either reading is higher, the participant will sit quietly for five minutes after which a second reading will be taken. The participant will not be allowed to take part in any portion of the fitness assessment if the second reading is also above 144/94.

*If you know that you have elevated blood pressure, you are advised to obtain doctor's clearance prior to coming in for the assessment.*

### **AEROBIC FITNESS**

Aerobic Fitness is assessed using a submaximal **Step Test** protocol. The participant will be required to step up and down a set of stairs for a set duration of 3 mins. The participant's heart rate will determine whether they continue for another round or finish at that stage. Each stage increases in cadence to continually raise heart rate. The combination of the heart rate, workload, cadence, weight, gender and age are used to predict the maximal oxygen consumption (VO<sub>2</sub> max). The greater the exercise intensity and the lower the heart rate, the greater the VO<sub>2</sub> max.

Aerobic fitness is the combined efficiency of your lungs, heart, bloodstream, and local muscles in getting the oxygen to these muscles and using it to perform work. For this reason, cardiovascular endurance or aerobic fitness is the most important component of physical fitness. The higher your VO<sub>2</sub> max, the greater your functional capacity is. With a larger aerobic capacity, daily activities require less effort and leave a bigger reserve for pursuing recreational activities and dealing with emergencies should they arise.

## MUSCULAR STRENGTH / MUSCULAR ENDURANCE / FLEXIBILITY

### **Muscular Strength and Endurance**

- **Grip Strength** is a measure of forearm strength and may be related to total body strength. Grip strength is measured using a hand dynamometer. The client grasps the dynamometer and squeezes as hard as possible. Each hand is measured twice.
- **Push-Ups:** Measure of upper body strength and endurance.

**Males:** The client lies on his stomach, legs together. His hands, pointing forward, are positioned under the shoulders. He then pushes up from the floor by fully extending the elbows and using toes as the pivot point. The client returns to the starting position. Neither the stomach nor thighs should touch the mat.

**Females:** Same as males except using the knees as the pivot point. The lower legs remain in contact with the floor, ankles plantar-flexed, and feet in contact with the floor.

Incorrect repetitions will not be counted. The test is stopped when the client is seen to strain forcibly or is unable to maintain correct technique over two consecutive repetitions. There is no time limit.

- **Partial Curl-Ups:** Measure of abdominal strength and endurance. Client lies in a supine position with the head resting on the mat, arms straight at sides and parallel to the trunk, palms of hands in contact with the mat, finger tips at the 0 mark. Knees are bent 90, keeping heels in contact with the mat and shoes on. Metronome is set at 50 beats/min. This is followed by curling up of the upper spine far enough so that the middle finger tips of both hands reach the 10cm mark. On the return, the shoulder blades and head must contact the mat and the finger tips of both hands must touch the 0 mark. The client performs as many consecutive curl-ups as possible without pausing. Incorrect repetitions will not be counted. The test is stopped when the client is seen to strain forcibly or is unable to maintain correct technique over two consecutive repetitions. There is no time limit.

### **Flexibility**

- **Sit and Reach:** Sit and reach (trunk flexion) is a measure of hips and back of thighs (hamstrings) flexibility. Sitting in front of a flexometer with knees fully extended. Lean forward and reach hands as far past the feet as possible. Assesses lower back and hamstring flexibility.

## **JOB-RELATED TEST DESCRIPTION**

### **Stage 1: Weighted bag lift**

The candidate will be required to lift a weighted bag of 50lbs off of one table and carry the bag 10 feet and return to place the bag back down. The movement must be fluid and controlled. This test will simulate lifting weight off of a truck or stretcher and moving the weight to a new location. Start time begins as soon as the candidate lifts the equipment off the table for a max of 2 minutes at the discretion of the evaluator.

### **Stage 2: Barbell stair carry**

The candidate will be required to lift a barbell of 90lbs (2x45lbs plates on each side) up and down a set of 3 stairs. The candidate will start at the bottom of the stairs and pick up the barbell letting it hang in a straight arm position. They will then proceed to walk up 3 sets of stairs, when both feet have reached the top of the set the candidate will then walk down the stairs in reverse essentially walking down the stairs backwards. Once they have reached the bottom they can lower the barbell weight. The weight must remain in their hands off ground the duration of the test and it must be done in a fluid motion in a reasonable amount of time. This test simulates carrying a stretcher as well as doing so while entering the front entrance of a house or apartment. Start time begins as soon as the candidate lifts the equipment off the floor at the discretion of the evaluator.

### **Stage 3: Chest compression**

*Maximum allowed time is 5 minutes*

The candidate must perform continuous chest compressions as demonstrated for 5 minutes. An adult CPR mannequin will be placed flat on the floor and the candidate must kneel down to perform the chest compressions. Start time begins as soon as the candidate begins compressions at the discretion of the evaluator.

### **Stage 4: Equipment carry**

The candidate is to carry one equipped medical kit up two flights (stories) of stairs and back down. The medical kits shall have handles and/or straps and be in good repair. The maximum weight for the kit shall be no more than 50 lbs and a minimum of 25 lbs. The candidate will carry the equipment in proper form by the handles or straps, ascend the stairs, turn directly around and descend the stairs. The candidate is allowed to place the equipment on any surface briefly (less than 5 seconds) ONLY ONCE for hand reposition after time has started. Start time begins as soon as the candidate lifts the equipment off the floor at the discretion of the evaluator.