



**Information and guide to self-preparation for the  
EXPRES Evaluation**

The health and physical fitness of Canadian Forces sailors, soldiers, airmen and airwomen are essential and critical components of operational readiness. Military personnel must possess a higher degree of health and physical fitness than the general Canadian population to function in complex and demanding environments where strength and endurance could be the difference between success and failure of an operation. Put simply, personnel must be healthy, physically fit, employable and deployable.

With a mandate to raise morale and promote physical fitness within the Canadian Forces community, the Canadian Forces Personnel Family Support Services (CFPFSS), Personnel Support Program (PSP) Division is responsible for managing and delivering high quality fitness, physical education, recreation, mess operations and sports programs at home and abroad.

With this in mind, it is imperative that PSP personnel employed as fitness delivery agents possess and maintain a superior level of physical fitness in order to lead and deliver safe and dynamic fitness sessions. Put simply, PSP fitness leaders must walk the talk!

To ensure Fitness and Sports Instructors possess the physical fitness core competencies, as a job requirement, candidates must successfully complete the CF EXPRES evaluation at the incentive level. This manual will assist you in preparing for the evaluation and answer questions you may have, please review it carefully.

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## GETTING READY

You should ***begin your preparation NOW*** to achieve as high a level of physical fitness as you can *before* your evaluation. Don't put it off. The longer you wait, the more difficult it will be to meet or surpass the objectives in the physical evaluation.

## TO START OFF RIGHT

### TRAINING TIPS

A good training program must be effective, safe and enjoyable! To do so, be sure to:

- Wear comfortable clothing that doesn't restrict your movement and running shoes that provide good support and traction.
- Start at a level that is right for you now and progress gradually from there.
- Take rest days when you need them so you don't overdo it.
- Choose cardiovascular activities, which involve large muscle groups which you can maintain for longer periods of time without stopping. Examples: cardiovascular exercise equipment, swimming, cycling and running. Since there is a running component to the EXPRES evaluation we do suggest that running be used as one of your training modes. When running, try to maintain a natural and comfortable stride length. Use a soft heel or flat-foot landing, rock forward, and gently push off your toes. Maintain an erect but relaxed posture, and move your arms forward and back (not sideways across your chest).

### SAMPLE TRAINING SESSION:

When starting a fitness program you should follow the **FITT** principle. This will ensure that you are getting the necessary training and recovery time for optimal gain.

#### WARM-UP (5-10 min.)

Typically a warm-up is used to increase blood flow to the muscles and prepare you for the activity that you have chosen to do as a workout. Light walking, biking, or a slow jog can be done to achieve these results. The warm-up should be followed by some light dynamic stretching involving the muscle groups that will be engaged during your training session.

#### AEROBIC FITNESS/ MUSCULAR STRENGTH SESSION (20-60 min.)

When starting your session, take into consideration the frequency, intensity, type of activity and your goals. For example the first set of exercises in a weight program is a warm-up set despite the fact that you have done a structured general warm-up.

### CALCULATING TARGET HEART RATE ZONE:

You are encouraged to monitor your heart rate prior to, during, and after your physical fitness training sessions. Monitoring heart rate prior to the exercise session will provide you with a resting heart rate value, which may be used as a baseline for measuring progress. Resting heart rate values should decrease as you become more aerobically fit. You are encouraged to monitor your heart rate during the exercise session to ensure that you are working within your target heart rate zone as prescribed. This will ensure maximum benefits are obtained from the exercise session.

Post-exercise heart rates should be taken to ensure that recovery from the exercise session is occurring. Heart rate may be monitored by a number of methods:

- a. Heart rate monitor; and
- b. Radial artery;

You must understand that your target heart rate zone is based on average heart rates for persons of similar age, and that your own heart rate reserve (HRR) could be below 49 or above the average. Therefore, you may have to adjust your level of activity so that you are comfortable.

### Target heart rate calculation

Maximum heart rate: **MHR**

Heart Rate Reserve: **HRR**

$$220 - \text{Age} = (\text{MHR})$$

$$\text{MHR} (\text{_____}) - \text{resting heart rate} (\text{_____}) = \text{HRR} (\text{_____})$$

$$\text{HRR} \times \frac{\text{_____}}{\text{Min}} \% \text{ intensity} + \text{Resting heart rate}$$

$$\text{HRR} \times \frac{\text{_____}}{\text{Max}} \% \text{ intensity} + \text{Resting heart rate}$$

Target heart rate zone:      Minimum \_\_\_\_\_      Maximum \_\_\_\_\_

## AEROBIC FITNESS SESSION:

**FREQUENCY:**      3-5 times a week

At the start of your program, exercising 3 times a week on non-consecutive days is best. After a few weeks you can increase your frequency to 4-5 times a week.

**INTENSITY:** 60-90% of your max Heart Rate

**TIME:**      20 – 60 Minutes

The first few weeks of your workout, the duration of your sessions should be closer to 20 minutes. Once you are comfortable with that time you can gradually increase your time by 2-3 min/week. The frequency and duration should not be increased in the same week, increase them one at a time.

**TYPE:**      Any activity that raises your heart Rate for the duration of your workout is a good activity. You should however work towards running, as this is a major component of Basic Training. Sample activities: Walking, running, biking, rope skipping, stair climber, aerobic classes, swimming etc.

## MUSCULAR STRENGTH SESSION:

**FREQUENCY:** 3 times per week  
Major muscle groups

**INTENSITY:** 70-90% of your predicted max lift  
1-3 sets  
8-12 reps  
8-12 exercises

**TIME:** 15-60 min  
Progressive

**TYPE:** Resistance training (free weights / machines) Include push-ups, sit-ups and chin-ups in your program, as these are components of Basic Training.

## COOL-DOWN (5-10min.)

Your cool-down can be similar to your warm-up. Walking, biking or a slow jog will bring your heart rate down gradually to allow your body to recover and help relieve delayed onset muscle soreness (DOMS). A helpful hint for your stretching exercises is to progress methodically from head to toe so that no major joints or muscles groups are forgotten.

*Warm-up and cool-down should be a regular part of your workout. Duration of these should be 5 – 10 min. This time is not counted as part of your 20 - 60 min workout time. Stretching can also be included in your cool-down.*

## PHYSICAL FITNESS EVALUATION (EXPRES TEST)

To ensure that you are ready for the physical fitness demands, you will be asked to undergo a *Physical Fitness Evaluation* as a part of the recruiting process. Successful completion of this *Evaluation* is a necessary step toward being employed.

There are four test items in the Evaluation: a **20 MSR or Step test** to measure your aerobic fitness, a **hand-grip** (squeeze) test to measure your muscular strength, **push-up** and **sit-up** tests to measure your muscular endurance, and

## INCENTIVE PERFORMANCE OBJECTIVES

Due to the rigors of employment, the CF EXPRES incentive standard must be achieved.

An Incentive level was developed to encourage members to perform at levels well above the minimum standard. Incentive levels are reflected in the table below.

## CF EXPRES INCENTIVE PROGRAM

CF EXPRES EVALUATION SCORES	INCENTIVE SCORES									
	MALE					FEMALE				
	AGE GROUP (YEARS)					AGE GROUP (YEARS)				
	17-19	20-29	30-39	40-49	50-55	17-19	20-29	30-39	40-49	50-55
STEP TEST (ml/kg/min)	57	48	45	39	35	39	37	33	31	30
20 MSR (stage completed)	10.0	10.5	8.0	7.0	5.5	6.0	5.5	5.0	4.0	3.5
MUSCULAR STRENGTH AND ENDURANCE	169	174	162	149	132	112	107	99	90	75

The techniques used for push-ups and sit-ups during the *Evaluation* are explained below.

### PUSH-UPS

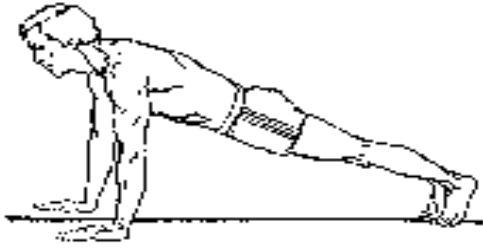
The following procedures will be used for push-ups:

**Start Position.** In the start position, lies in a prone position with feet together with the hands pointing forward and positioned underneath the shoulders. To establish an acceptable hand position the evaluator may stand directly over you. If the evaluator can see your entire hand(s), then the position of the hands are too wide. Conversely, if the hands are under the chest and the evaluator cannot see any portion of your hand(s) then the position is too narrow. Elbows should be comfortably along the sides.

**Movement/Extension Phase.** Using the toes as the pivotal point, push up from the start position by extending the arms into full extension. During this extension movement the elbows may flare out to the side as long as the hands remain in position pointing forward (it is **not required** that you maintain elbows close to the sides during the movement phase, thus performing more of a triceps push-up). The body must be kept in a straight line; including the head that should not normally be cocked to look forward as such action is contraindicated. Descend to the down position.

**Down Position.** The **down position** differs from the **start position** in that you do not return to lying on your stomach. During the execution of the push-ups you use your muscular endurance to keep your body suspended off the floor/mat throughout the evaluation. The proper down position has the back of the upper arms (triceps area) parallel to the floor/mat. The chin, chest area, stomach, thighs, or knees should not touch the floor/mat in the down position. However, incidental contact of any body part should not be used as a reason to terminate the test, or not count push-ups, unless through such contact you are gaining clear advantage. Once you have attained the down phase, continue with the next push-up (extension phase).

**Counting.** Push-ups are to be performed continuously and without a time limit. Push-ups that do not conform to the described protocol will not be counted. The test shall be discontinued as soon as you are seen to strain forcibly to complete a push-up or are unable to maintain proper push-up technique.



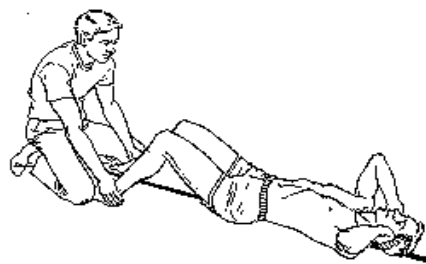
## SIT-UPS

The following procedure will be used for **sit-ups**:

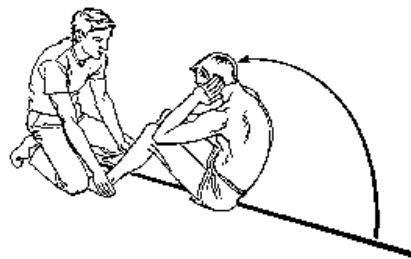
**Start Position.** Lie in a supine position, knees bent at a right angle (90 degrees), and feet about 30cm apart. Your ankles will be held to ensure that the heels are in constant contact with the mat. The hands must be placed on the side of the head and remain in contact with the head at all times. Touching or cupping the ears acceptable, while pulling on the ears is not

**Movement/Sit-up Phase.** When ready, you will be given the command **begin**. You are required to sit-up, initially keeping the lower back flat against the ground and “curling” up to touch the top of the knees with elbows, and then lower yourself back to the **start position**. When returning to the start position, the shoulder blades must come in contact with the mat between each repetition.

**Counting.** The initial touch of the elbows to the top of the knees counts as one. Each subsequent touch of the knees, when the sit-up has been performed properly, counts as another repetition. You will perform as many repetitions as possible within one minute. You may pause whenever necessary. Improperly performed sit-ups (i.e. did not return to starting position, lifted buttocks to gain momentum), will not be counted. The test shall be discontinued as soon as you are seen to strain forcibly to complete a sit-up.



Start / Down position



Up position

## PRE-TEST INFORMATION & INSTRUCTIONS FOR PARTICIPANTS

### Pre-Screening:

You will complete a health appraisal questionnaire and a pre- test vital signs check consisting of resting blood pressure and resting heart rate measurements by your tester.

### Informed Consent:

You will be required to read and sign consent prior to performing the battery of tests.

### Dress Requirement:

You should dress in clean indoor running shoes, shorts, and a T-shirt or sweat shirt.

### Proof of Identification:

Bring Photo ID, such as: current driver's license, photo health card, Military ID, photo student cards etc.

### Pre-Evaluation Instructions:

To ensure accurate test, please adhere to the following instructions:

- **Physical Exercise:** No strenuous physical activity **minimum six hours (6hrs)** before the test.
- **Food and Beverages: -**  
Do not eat for at least **two hours (2hrs)** before your test.  
Refrain from consuming alcohol for at least **six hours (6hrs)** before your test.  
Refrain from drinking caffeine beverages for at least **two hours (2hrs)** before your test (tea, pop, coffee, etc.).  
Refrain from smoking for at least **two hours (2hrs)** before your test.

*NOTE: THE RESULTS OF YOUR TEST MAY BE NEGATIVELY AFFECTED IF THE CONDITIONS CONCERNING DRESS, FOOD, SMOKING, BEVERAGES AND EXERCISE ARE NOT FOLLOWED. IF YOU CLEARLY IGNORED THESE INSTRUCTIONS, THE EVALUATOR MAY CANCEL YOUR TEST.*

### Post Evaluation

You will remain in the test area until your post-exercise heart rate has decreased to less than 100 BPM.

Good luck!