



CANADIAN SPECIAL OPERATIONS FORCES COMMAND PHYSICAL FITNESS SCREENING EVALUATIONS

OPERATIONS MANUAL

Canadian Special Operations Forces Command Physical Fitness Screening Evaluations

Operations Manual 1st Edition, 2017

FOREWORD

1. The 1st edition of this Operations Manual has been prepared to provide instructions and guidance for conducting Canadian Special Operations Forces Command (CANSOFCOM) Physical Fitness Screening (PFS) Evaluations.
2. CANSOFCOM PFS Evaluations were developed for the Canadian Joint Incident Response Unit (CJIRU) Chemical, Biological, Radiological and Nuclear (CBRN) Operator occupation, and the Canadian Special Operations Regiment (CSOR) Special Forces (SF) Operator occupation, under the supervision of the Canadian Forces Morale and Welfare Services, Directorate of Fitness (DFit).
3. As of DATE, this Operations Manual is the only reference for conducting the CANSOFCOM PFS Evaluations for the SF Operator and CBRN Operator occupations.
4. DFit may make modifications to this Operations Manual and they will forward the changes to you accordingly.
5. It is essential that you strictly adhere to and carefully administer the evaluation protocols and instructions provided in this Operations Manual in order to ensure valid and reliable results.
6. You (the Evaluator) must familiarize yourself with the instructions and ensure that you conduct each evaluation in the safest manner and environment possible.
7. Should you have any questions with the protocols or descriptions found within this Operations Manual, we ask that you contact your Manager, Fitness, Sports & Recreation (**or equivalent**) or the Directorate of Fitness, Sports and Health Promotion office at DFit-Cphysd@forces.gc.ca

Signature
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CHAPTER 1: INTRODUCTION

BACKGROUND

1. The Commander (Comd) of the Canadian Special Operations Forces Command (CANSOFCOM) directed that the research and development of scientifically valid Physical Fitness Screening (PFS) Evaluations and standards for the Canadian Joint Incident Response Unit (CJIRU) and Canadian Special Operations Regiment (CSOR) be undertaken.
2. To this end, a PFS Evaluation and supporting standard was developed for applicants applying for service with CJIRU as a Chemical, Biological, Radiological and Nuclear (CBRN) Operator. As well, a PFS Evaluation and supporting standard was developed for applicants applying for service with CSOR as a Special Forces (SF) Operator.
3. The CBRN Operator PFS Evaluation and the SF Operator PFS Evaluation are the result of many years of research specifically focused on the physical demands required for the safe and effective completion of each CANSOFCOM Unit's respective job tasks.
4. The Comd of CANSOFCOM approved the resulting CANSOFCOM PFS Evaluations and supporting standards on DATES.

GENERAL

5. The CANSOFCOM PFS Evaluations contained within this Operations Manual are to be administered to CAF personnel by their local Personnel Support Programs (PSP) Fitness Staff.
6. Only local PSP Fitness Staff who are qualified as an Evaluator may administer the CANSOFCOM PFS Evaluations contained within this Operations Manual.
7. The CANSOFCOM PFS Evaluation to be administered will depend on the CANSOFCOM Unit to which the CAF member is applying:
 - If a CAF member wishes to apply for service with CJIRU as a CBRN Operator, they will be required to perform the CBRN Operator PFS Evaluation as part of the application process.
 - If a CAF member wishes to apply for service with CSOR as an SF Operator, they will be required to perform the SF Operator PFS Evaluation as part of the application process.

8. Each CANSOFCOM PFS Evaluation is a scientifically validated physical fitness evaluation and standard, which is based on the physical demands required to safely and effectively perform specialized CANSOFCOM training and each Unit's respective job tasks.

CBRN OPERATOR PFS EVALUATION

9. The CBRN Operator PFS Evaluation is designed to capture the movement patterns, energy systems, and muscle groups recruited in the performance of CBRN Operator specialized training and job tasks.
10. The CBRN Operator PFS Evaluation is comprised of five individual components:
 - a. **Relative Handgrip:** Measurement of upper body muscular strength.
 - b. **Standard Load Squat:** Measurement of lower body muscular strength.
 - c. **Pull-ups:** Measurement of upper body muscular strength and endurance.
 - d. **Sit-ups:** Measurement of torso/core muscular strength and endurance.
 - e. **20 Metre Shuttle Run (20MSR):** Measurement of aerobic capacity.
11. The five individual CBRN Operator PFS Evaluation components are performed consecutively, in order, and with a minimum five-minute to a maximum eight-minute break between components. This break allows for adequate recovery and to transition from one component to the next.

SF OPERATOR PFS EVALUATION

12. The SF Operator PFS Evaluation is designed to capture the movement patterns, energy systems, and muscle groups recruited in the performance of SF Operator specialized training and job tasks.
13. The SF Operator PFS Evaluation is comprised of eight individual components, conducted over two consecutive days:
 - a. **Day 1:**
 - i. **Relative Handgrip:** Measurement of upper body muscular strength.

- ii. **Standard Load Squat:** Measurement of lower body muscular strength.
 - iii. **Pull-ups:** Measurement of upper body muscular strength and endurance.
 - iv. **Sit-ups:** Measurement of torso/core muscular strength and endurance.
 - v. **Push-ups:** Measurement of upper body muscular strength and endurance.
 - vi. **20MSR:** Measurement of aerobic capacity.
 - vii. **Combat Swim Test:** Measurement of swimming capabilities.
- b. **Day 2:**
- i. **Ruck March:** Measurement of the physical conditioning associated with carrying loads.
14. The seven SF Operator PFS Evaluation components completed on Day 1 are performed consecutively, in order, and with a minimum five-minute to a maximum eight-minute break between components. This break allows for adequate recovery and to transition from one component to the next.
15. **NOTE:** If the seven SF Operator PFS Evaluation components comprising Day 1 are administered in the morning, then the Ruck March evaluation to be completed on Day 2 must also be administered in the morning. This is required for purposes of standardization and to permit adequate recovery time. Similarly, if the seven SF Operator PFS Evaluation components comprising Day 1 are administered in the afternoon, then the Ruck March evaluation to be completed on Day 2 must also be administered in the afternoon.

AIM

16. This Operations Manual provides guidance and direction on how to administer both the CBRN Operator PFS Evaluation and the SF Operator PFS Evaluation. All PSP Fitness Staff involved in the overall administration of either evaluation must adhere to this manual.

REFERENCES

17. The following orders, directives, and publications are associated with the CANSOFCOM PFS Evaluations and this Operations Manual. You can find the following Defence Administrative Orders and Directives (DAODs) on the Defence Wide Area Network (DWAN) at <http://www.forces.gc.ca/en/about-policies-standards-defence-admin-orders-directives/index.page>
 - a. CANSOFCOM Commander's Directive 03-07: Physical Fitness
 - b. DAOD 2007-1, General Safety Program
 - c. DAOD 5023-2, Physical Fitness Program
 - d. DAOD 5045-0, Canadian Forces Personnel Support Programs
 - e. DAOD 7002-3, Investigative Matters and References
 - f. Director Medical Policy Instruction 4000-21, <http://cmp-cpm.mil.ca/en/health/policies-direction/policies/4000-01.page>

REQUIREMENT AND RESPONSIBILITY

18. Effective DATE, the CBRN Operator PFS Evaluation became the official fitness evaluation for all CAF members applying for service with CJIRU as a CBRN Operator, as approved by the Comd CANSOFCOM.
19. Effective DATE, the SF Operator PFS Evaluation became the official fitness evaluation for all CAF members applying for service with CSOR as an SF Operator, as approved by the Comd CANSOFCOM.
20. Additional requirement and responsibility falls to the following Offices of Primary Interest (OPI) and key stakeholders:
 - a. Directorate of Military Career Policy and Grievance: The OPI for fitness policy covered under DAOD 5023-2, Physical Fitness Program.
 - b. Chief of Military Personnel Command (CMPC): The OPI for CAF Physical Fitness Programs.
 - c. Canadian Forces Morale and Welfare Services (CFMWS)/Directorate of Fitness (DFit): On behalf of CMPC, acts as the primary advisor on all matters pertaining to CAF physical fitness.
 - d. National Training Center: PSP National Training Center: Responsive to the Directorate of Fitness. They are responsible for the command and control of the CANSOFCOM PFS Evaluation

Qualification Standards. They establish the necessary resources for the training and qualifications of Base/Wing PSP Fitness staff.

- i. **Senior Manager PSP and Manager Fitness, Sports and Recreation (MFSR) (or equivalent):** Responsive to the needs of their respective Base/Wing Commanding Officer (CO). They are responsible for:
 - Delivering future CANSOFCOM PFS Evaluation Qualification Standards.
 - Maintaining an up-to-date list of local PSP Fitness Staff qualified as Evaluators to administer each respective CANSOFCOM PFS Evaluation.
 - Ensuring protocols as described in the CANSOFCOM PFS Evaluation Operations Manual are being followed accurately.
 - Ensuring that all Evaluators (local PSP Fitness Staff) remain current on any protocol changes.
- ii. **Evaluators:** Local PSP Fitness Staff are responsive to their MFSR to ensure the needs of their respective Base/Wing CO are met by planning, organizing, conducting, instructing, and evaluating CAF members on each respective CANSOFCOM PFS Evaluation.

CHAPTER 2: CANSOFCOM PFS EVALUATIONS

PART I: PRE-EVALUATION ADMINISTRATION

EVALUATION SCHEDULE

1. Evaluation schedules/booking procedures will vary by location.

PRE-EVALUATION INSTRUCTIONS FOR CAF MEMBERS

2. A minimum of 48 hours prior to the CANSOFCOM PFS Evaluation being administered, you must inform the CAF member (participant) of the following guidelines, where they should not:
 - a. Exercise six hours prior to the evaluation.
 - b. Consume alcohol for at least six hours prior to the evaluation.
 - c. Eat, smoke, chew smokeless tobacco, or take stimulants (tea, coffee, energy drinks, pharmaceuticals, etc.) at least two hours prior to the evaluation.
3. Non-compliance with the above instructions does not necessarily mean PFS Evaluation postponement; however, inform the participant that it may have a negative effect on their results.
4. Dress requirements that are common to all CANSOFCOM PFS Evaluations are as follows:
 - d. Fitness dress of choice (e.g., t-shirt, shorts, etc.).
 - e. Running shoes.
5. Additional dress requirements for the SF Operator PFS Evaluation are as follows:
 - f. Boots typically worn in the field and with ankle support.
 - g. Combat pants and shirt.
 - h. Replica C-7 rifle and sling (provided) for the Combat Swim component.
 - i. Rucksack (Rucksack only weighted to 35 kg – may be provided).

6. There are no additional dress requirements for the CBRN Operator PFS Evaluation.
7. Inform participants to bring the required dress with them to the PFS Evaluation.

EVALUATOR RESPONSIBILITIES

8. **Local PSP Fitness Staff:**
 - a. Local PSP Fitness Staff may only administer the CANSOFCOM PFS Evaluation for which they have achieved the Qualification Standard.
 - b. We recommend that local PSP Fitness Staff should be organized in such a manner as to ensure that one-on-one evaluation is achieved, in order to ensure valid and reliable results.
 - c. Local PSP Fitness Staff are responsible for the completion and accuracy of Sections B, C, D and E of the Department of National Defence (DND) 4368 CBRN Operator PFS Evaluation Reporting Form and DND 4369 SF Operator PFS Evaluation Reporting Form.

ENVIRONMENTAL CONDITIONS FOR THE EVALUATION

9. Cold or heat can worsen the physiological strain of exercise and thus may influence PFS Evaluation performance. The ideal environmental conditions for conducting the PFS Evaluation are between 20–22 degrees (°) Celsius (C) with a relative humidity of less than 60 percent (%) and adequate airflow (American College of Sports Medicine [ACSM], 2014).
10. We recognize that ideal environmental conditions may not always be attainable and if this is the case, the Evaluator should consider cancelling the PFS Evaluation if the temperature falls below -15°C or above 25°C. The greatest risk for heatstroke exists during high intensity prolonged exercise (ACSM, 2014), and therefore the Canadian Society for Exercise Physiology (CSEP) recommends that fitness testing be avoided when the temperature exceeds 25°C (CSEP, 2013). Conversely, the risk of frostbite is less than 5% when the ambient temperature is greater than -15°C (ACSM, 2014).

EMERGENCY PROCEDURES

11. When the PFS Evaluation is properly administered, there are minimal risks to the participant. Nevertheless, each local PSP Fitness Staff will develop an appropriate emergency protocol in conjunction with their respective location's Standard Operating Procedures. In addition, the local PSP Fitness Staff will ensure that:
 - a. All Evaluators are First Aid and Cardio-Pulmonary Resuscitation (CPR) qualified.
 - b. Evaluators have briefed all participants on safety requirements and emergency procedures prior to the start of the PFS Evaluation.
 - c. The location of the closest Automated External Defibrillator (AED) has been identified (when available).

NOTE: In the event of a physical incident, implement the procedures of your local Occupational Health and Safety Committee.

Refer to 2007-1 General Safety Program, for more information.

PART II: EVALUATION SET-UP

EQUIPMENT FOR CANSOFCOM PFS EVALUATIONS

12. The following are minimal equipment requirements when conducting both CANSOFCOM PFS Evaluations:
 - a. standing weigh scale
 - b. measuring tape, minimum 20 metres (m) in length
 - c. 24 m distance on a hard, flat surface, indoors or outdoors
 - d. 8 x pylons
 - e. floor tape
 - f. audio recording of 20MSR and supporting audio equipment
 - g. calculator
 - h. JAMAR® hydraulic handgrip dynamometer:
 - Model 5030 J1, Sammons Preston Inc., Bolingbrook, IL, USA
 - i. cushioned floor mat
 - j. pull-up bar
 - k. hand chalk (optional)
 - l. squat rack
 - m. 1 x goniometer
 - n. 1 x 20 kilogram (kg) Olympic bar
 - o. 2 x sets of Olympic bar weight plates, 26 kg each (total 52 kg)
 - p. 2 x Olympic bar weight clips
 - q. shoulder yoke (e.g., Manta Ray®) (optional)
 - r. metronome, with 42 beats per minute ($b \cdot \text{min}^{-1}$) cadence capability

- s. metronome speaker with attachment (optional)
 - t. push-counter (optional)
 - u. chair with arm rests
 - v. sphygmomanometer and stethoscope or automated blood pressure (BP) device
 - w. stopwatch
 - x. clipboard
 - y. pen
 - z. respective PFS Evaluation Reporting Form (DND 4368, Tool 1 or DND 4369, Tool 2)
 - aa. CANSOFCOM PFS Evaluation Operations Manual
 - bb. Local Incident Report Form
13. In addition to the minimal equipment requirements listed above, the following are additional equipment requirements when conducting the SF Operator PFS Evaluation:
- cc. Replica C-7 training rifle and sling (for Combat Swim Test).
14. There are no additional equipment requirements when conducting the CBRN Operator PFS Evaluation.

CALIBRATION OF EQUIPMENT

15. It is essential to calibrate the equipment to ensure the accuracy and the validity of the evaluation results.
16. The weight of most equipment is not expected to change from day to day. Nevertheless, ensure that the weight plates and Olympic bar are weighed once a year.
17. Calibrate the standing weigh scale using known weights once a year.
18. Calibrate the JAMAR® hydraulic handgrip dynamometer as stated in the manufacturer's instruction manual provided with the dynamometer kit.

EVALUATION CENTRE SET-UP

19. General to all CANSOFCOM PFS Evaluations:

- a. Prior to conducting any CANSOFCOM PFS Evaluation, the Evaluator will complete a facility, equipment and floor surface inspection to eliminate any tripping/slipping hazards, equipment malfunctions, obstacles, inappropriate surfaces, and general safety risks.

20. Relative Handgrip Set-up:

- a. Ensure that the handle attachment of the JAMAR[®] hydraulic handgrip dynamometer is set to the middle (3rd) rung of the device body (Figure XX); and
- b. Ensure that the weigh scale, calculator and hand chalk (optional) are readily available.

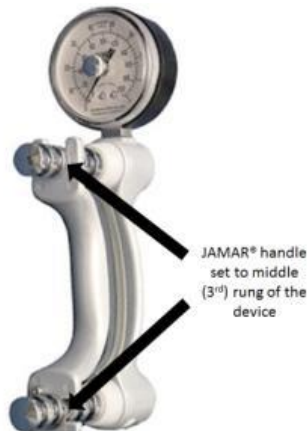


Figure XX: JAMAR Device and Handle Configuration

21. Standard Load Squats Set-up:

- a. Ensure that the Olympic bar and Olympic weight plates combine to equal 72 kg or 158.5 Lbs (with a ± 0.5 lbs difference).
- b. Clip/fasten securely the Olympic weights to the Olympic bar using the Olympic bar weight clips.
- c. Position the safety stoppers on the squat rack just below the participant's shoulders when the participant is squatting down to 90° at the rotational axis of the knee. For the resting position, position the bar just below the participant's shoulders when in a standing position.

- d. Ensure that the goniometer and push-counter (optional) are in close proximity and easily accessible.
 - e. Set the metronome to a cadence of $42 \text{ b}\cdot\text{min}^{-1}$ and position it in such a way that the participant can clearly hear the audible tone.
22. **Pull-ups Set-up:**
- a. Have hand chalk (optional) readily available.
 - b. No additional instructions are required for the set-up of the pull-ups.
23. **Sit-ups Set-up:**
- a. Ensure that the cushioned floor mat, goniometer and push-counter (optional) are all in close proximity and easily accessible.
 - b. Position the cushioned floor mat away from walls and objects, providing sufficient space for administering the sit-ups.
24. **Push-ups Set-up:**
- a. Ensure that sufficient space is provided to the participant and Evaluator for administering the push-ups.
 - b. No additional instructions are required for the set-up of the push-ups.
25. **20MSR Set-up:**
- a. Lay out the 20MSR in an organized fashion over a flat, hard surface (Figure XX).
 - b. Position the 20 m area so that any walls and/or objects are at least 2 m away from each end of the 20 m area (thus, the requirement for a minimum 24 m long area).
 - c. Measure in a distance of 1 m from each end of the 20-m course.
 - d. Place lines using floor tape (at the 20 m and 19 m lines) and highlight the ends of each line with pylons (Figure XX).
 - e. Place the floor tape and pylons inside the 20 m mark and inside the 19 m mark.

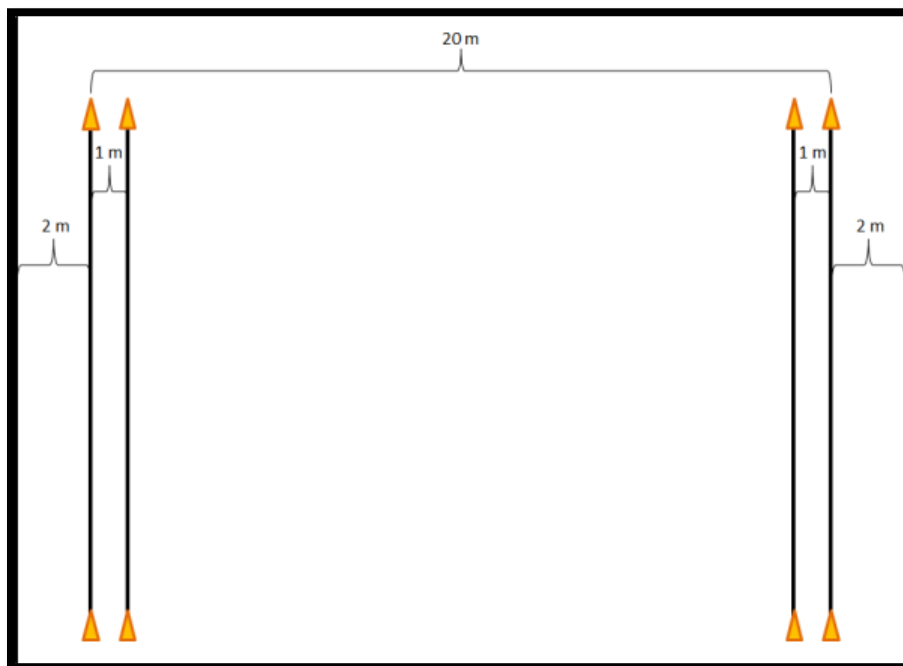


Figure XX: Layout of the 20MSR Component of the SOIE Course PPFE

26. Combat Swim Test Set-up:

- a. Conduct the combat swim test in the deep end of a pool. Ensure that a swimming lane is open and available in the pool. The width of the swimming lane must be a minimum of 2 m wide.

27. Ruck March Set-up:

- a. Ensure that the 12 km course, preferably an outdoor road, is accurately measured and marked with pylons. Two pylons will be positioned in a straight line at the starting point (and turn-around point, if required), with enough space to allow the participant to pass between the pylons. If needed, you can also administer the test in an indoor facility, if available.

PART III: REGISTRATION

INFORMATION SECURITY

28. The CANSOFCOM PFS Evaluation Reporting Forms (DND 4368 & DND 4369) are 'Protected A' and must be treated as such.

DND 4368 & 4369 SECTION A – SERVICE PARTICULARS

29. Firmly and legibly, print all service particulars in the boxes located on the applicable Reporting Form (DND 4368 or 4369). If a number has fewer digits than the allocated spaces on the form, use zeros, beginning at the left side. For example, record a Date of Birth (DOB) of 07 Mar 1960 as 1960/03/07.

Section A: Service Particulars - Détails du service

Surname - Nom										Init.		Rank - Grade			Military ID Pièce d'identité militaire <input type="checkbox"/> Yes <input type="checkbox"/> No	
DOB / DN - YYAA				MM		DJ		Age		Sex - Sexe <input type="checkbox"/> M <input type="checkbox"/> F		SN - NM				
Location - Lieu			Unit - Unité					UIC - CIU			MOS ID - ID SGPM					

DND 4368 & 4369 SECTION B – HEALTH APPRAISAL

30. Prior to attempting the CANSOFCOM PFS Evaluation, all participants must complete the Health Appraisal, Section B of the applicable form (see the reference image below). The Health Appraisal consists of three questions that the participant must carefully read and answer honestly, and to the best of their knowledge. This procedure is necessary to identify potential health issues that require a medical consultation prior to an evaluation.

Section B: Health appraisal - Évaluation de la santé

This questionnaire is a screening device to identify personnel for whom fitness evaluation and physical activity might be inappropriate at this time.	Yes Oui	No Non	Le présent questionnaire est un outil visant à identifier les personnes pour lesquelles une évaluation de la condition physique et l'activité physique sont actuellement contre-indiqués.
1. To the best of your knowledge do you have a medical condition or Medical Employment Limitation (MEL) which restricts you from participating in a maximal fitness evaluation or a progressive training program?	<input type="checkbox"/>	<input type="checkbox"/>	1. À votre connaissance souffrez-vous d'un trouble médical ou avez-vous une contrainte à l'emploi pour raisons médicales (CERM) qui vous empêchent de participer à une évaluation de la condition physique avec effort maximal ou à un programme de conditionnement physique progressif?
2. Is there any other reason you would need to talk to a physician prior to your fitness evaluation or training program?	<input type="checkbox"/>	<input type="checkbox"/>	2. Y a-t-il d'autres raisons pour lesquelles vous devriez consulter un médecin avant de participer à l'évaluation de la condition physique ou d'entreprendre un programme de conditionnement physique?
3. Do you have a valid Periodic Health Assessment (PHA)? If No, proceed to Blood Pressure.	<input type="checkbox"/>	<input type="checkbox"/>	3. Est-ce que votre examen médical périodique (EMP) est valide? Si Non allez à la tension artérielle.
Blood Pressure	<input type="checkbox"/>	<input type="checkbox"/>	Tension artérielle
Your pre-evaluation blood pressure is less than or equal to 150/100 mm Hg.			Votre tension artérielle avant l'évaluation est moins ou égal à 150/100 mm Hg.
Your pre-evaluation blood pressure lies between 141/91 mm Hg and 150/100 mm Hg and is considered to be slightly above the normal range. <input type="checkbox"/> It is recommended that you consult your MO.			Votre tension artérielle avant l'évaluation se situe entre 141/91 mm Hg et 150/100 mm Hg. Cette valeur étant légèrement supérieure à la normale, il vous est recommandé de consulter votre médecin.
<input type="checkbox"/> Referred to Health Care Provider Adressé à un fournisseur de soins de la santé			
Name (print) - Nom (en lettre moulées)		Signature of member - Signature du militaire	
		Date - (YYAA) (MM) (DJ)	

NOTE: Only participants who answered “NO” to the first two questions and “YES” to the third question, or met the BP requirements above, are cleared for the PFS Evaluation.

31. A Periodic Health Assessment (PHA) is valid for five years for CAF personnel under 40, and two years for CAF members over 40 for all Military Occupation Structure Identification (MOSID) unless otherwise specified. When a PHA is performed between the ages of 35 and 40, it will be valid for a maximum period of five years, but not beyond age 42 (see Table 1 below).

Age	PHA Validation Period
Less than 40 years of age	5 years
More than 40 years of age	2 years
Between 35–40 years of age	5 years, but not beyond age 42

Table 1: Periodic Health Assessment (PHA) Validation Period

32. If the participant has a valid PHA, proceed to the PFS Evaluation (Chapter 2, Part IV).
33. If the participant has an expired or invalid PHA, the Evaluator will follow the guidelines outlined in Tool 3: Blood Pressure Procedures, and measure the participant’s BP using a stethoscope and sphygmomanometer. The Evaluator will check off the appropriate BP box of Section B once they have verified the participant’s BP:
- OK:** If the participant’s BP is less than or equal to (\leq) 150/100 millimetres of mercury (mmHg) or has met the criteria set out by their

Medical Officer (MO), proceed to the PFS Evaluation.

or

- **High:** If the participant's BP is in the range of 141/91 to 150/100 mmHg, the participant may benefit from seeing a qualified Health Care Provider. However, the participant may still proceed with the PFS Evaluation.

or

- **Over:** If the participant's BP is greater than or equal to (\geq) 151/101 mmHg or above the MO's recommended criteria, their pre-evaluation BP is over the normal range. Have the participant rest quietly for five minutes before repeating the measurement. If their BP is over the normal range or above the MO's recommended criteria again, the participant is not fit for the PFS Evaluation. Advise the participant that their BP reading is slightly above the normal range and refer them to their Health Care Provider (see below). Verbally tell the participant that there is no cause for alarm and that consulting a Health Care Provider serves as a simple safety precaution.

34. **Referral to a Health Care Provider:**

- Refer the participant to a Health Care Provider when:
 - i. The participant answers "YES" to one or both of the first two questions of the Health Appraisal (Section B) on the applicable form (DND 4368 or 4369).
or
 - ii. The participant answers "NO" to question 3 of the Health Appraisal (Section B) on the applicable form (DND 4368 or 4369) AND their measured BP exceeds 150/100 mmHg or above the MO's recommended criteria after two attempts.
or
 - iii. The participant develops any symptoms, which in the experience of the Evaluator or the participant, are outside of those normally encountered.

or

- iv. You, as the Evaluator, are concerned for the participant's well-being.
or
- v. A referral is requested by the participant.

35. Referral Process:

- Participants referred to a Health Care Provider will be provided with the applicable reporting form (DND 4368 or 4369), with the following information:
 - i. Section A+B filled out.
 - ii. Ensure that the 'Referred to Health Care Provider' box is checked off in Section B.
 - iii. Ensure that the participant prints their name, signs and dates Section B.
 - iv. The Evaluator will cross out Sections C and E, and print and sign Section D.

NOTE: DO NOT ATTEMPT to diagnose or discuss in detail why the participant had a "YES" response or why their BP is above the criteria for pre-screening.

PART IV: CANSOFCOM PFS EVALUATIONS

CBRN OPERATOR PFS EVALUATION OVERVIEW

36. The CBRN Operator PFS Evaluation is designed to capture the movement patterns, energy systems, and muscle groups recruited in the performance of CBRN Operator specialized training and job tasks.
37. The CBRN Operator PFS Evaluation consists of five individual components, each with its own performance standard.
38. The components are performed consecutively, in order, and with a minimum 5 min to a maximum of 8 min break between each component. This allows for adequate recovery and to transition from one component to the next.
39. The sequence of CBRN Operator PFS Evaluation component administration, and the standard to be successful on each component are as follows:

Component	Standard
Relative Handgrip	≥ 1.00, relative to body mass (kg), plus 20 kg
Standard Load Squats	≥ 11 repetitions (reps), continuous
Pull-ups	≥ 5 reps, continuous
Sit-ups	≥ 40 reps, in 1 min
20MSR	≥ Level 8.0

Table XX: CBRN Operator PFS Evaluation Component Sequence & Minimum Standards

SF OPERATOR PFS EVALUATION OVERVIEW

40. The SF Operator PFS Evaluation is designed to capture the movement patterns, energy systems, and muscle groups recruited in the performance of SF Operator specialized training and job tasks.
41. The SF Operator PFS Evaluation consists of eight individual components, conducted over two consecutive days.
42. The seven components performed on Day 1 are performed consecutively, in order, and with a minimum 5 min to a maximum of 8 min break between

each component. This allows for adequate recovery and to transition from one component to the next.

43. The sequence of SF Operator PFS Evaluation component administration, and the standard to be successful on each component are as follows:

Component	Standard
Day 1	
Relative Handgrip	≥ 1.00, relative to body mass (kg), plus 20 kg
Standard Load Squats	≥ 11 reps, continuous
Pull-ups	≥ 5 reps, continuous
Sit-ups	≥ 40 reps, in 1 min
Push-ups	≥ 40 reps, continuous
20MSR	≥ Level 9.0
Combat Swim Test	25 m, no time limit
Day 2	
Ruck March	12 km carrying 35 kg in ≤ 2:24:00 hr:min:sec

Table XX: SF Operator PFS Evaluation Component Sequence & Minimum Standards

INFORMATION BRIEFING

44. Before the warm-up and movement preparation, the Evaluator will provide a clear explanation of each component being performed as part of the specific CANSOFCOM PFS Evaluation being administered. The explanation will follow the applicable scripts, provided in Tool XXX. Additionally, for the specific CANSOFCOM PFS Evaluation being administered, the Evaluator will discuss the objectives of the PFS Evaluation, the minimum performance standard for each component, general technical information highlighting ideal technique, the Emergency Action Plan (EAP), and provide an opportunity for the participant to ask questions about the PFS Evaluation.
45. During the PFS Evaluation explanation, an Evaluator will ensure to demonstrate the following components of the PFS Evaluation, as applicable:
- a. Relative Handgrip:

- i. Proper grip position with the JAMAR®.
- b. Standard Load Squats:
 - i. Three complete reps of the Standard Load Squat, ensuring proper squatting technique and keeping with the beat of the metronome.
 - ii. The Evaluator may conduct this demonstration with an unloaded Olympic bar if they so choose.
- c. Pull-ups:
 - i. Three complete reps of the Pull-ups, ensuring proper technique.
- d. Sit-ups:
 - i. Three complete reps of the Sit-ups, ensuring proper technique.
- e. Push-ups:
 - i. Three complete reps of the Push-ups, ensuring proper technique.
- f. 20MSR:
 - i. One down-and-back repetition of the 20MSR (without audio), ensuring proper contact with the 20 m lines, proper pivot and turn-around, and highlighting violations associated with the 19 m line.
- g. Combat Swim Test:
 - i. No demonstration required.
- h. Ruck March:
 - i. No demonstration required.

WARM-UP/EVALUATION PREPARATION

- 46. Prior to the PFS Evaluation, participants must undergo a warm-up and evaluation preparation lead by an Evaluator. It is recommended that the warm-up and evaluation preparation include the following:
 - a. Myofascial release techniques (i.e., foam rolling).

- b. Light aerobic activity (10–12 min).
 - c. Dynamic movements (5–8 min) that reflect the movement patterns used during the PFS Evaluation. Have the participant perform these movements in a smooth and controlled manner, going to full range of motion and using correct technique.
47. Recommend an additional 2–5 min warm-up period (to be completed at the participant’s discretion).
48. A comprehensive list of warm-up/evaluation preparation exercises is in Tools 5 and 6.

PFS EVALUATION TERMINATION

49. A PFS Evaluation is terminated when one of the following scenarios occurs:
- a. The participant successfully completes all components comprising the specific PFS Evaluation being administered.
 - b. The participant chooses not to continue. Reasons for this could be fatigue, pain, injury, etc.
 - c. The participant fails to respond to two warnings given by the Evaluator, on any one PFS Evaluation component.
 - d. The Evaluator becomes concerned for the participant’s safety due to immediate signs of serious distress.
 - e. A physical incident occurs, resulting in the participant being physically unable to continue.
50. When the PFS Evaluation is terminated for any one of the reasons in 49.b–e, it is considered a Failure/Did not meet standard.

NOTE: If it is evident that a participant will not complete the PFS Evaluation to the applicable standard, the Evaluator may allow them to continue until the participant completes the PFS Evaluation. We encourage this in order to provide specific fitness programming and training recommendations to the participant.

RELATIVE HANDGRIP PROTOCOL

51. **General Information:**

- a. The Relative Handgrip evaluation is linked to the upper body muscular strength requirements for the safe and effective completion of specialized CANSOFCOM training and job tasks.
- b. The Relative Handgrip score is calculated as a ratio, where combined (left and right) handgrip strength is divided by total body mass, plus 20 kg. The addition of 20 kg accounts for the minimum weight of Mission Essential Gear (MEG) carried during specialized CANSOFCOM training and job tasks.
- c. Intuitively, participants with a score of < 1.00 would not possess the handgrip strength required to support their body mass plus MEG during specialized CANSOFCOM training and job performance, leading to an increased risk of injury.

52. **Relative Handgrip Protocol:**

- a. While dressed in their fitness dress of choice and running shoes, participants will be weighed to the nearest 0.1 kg. This body mass will be recorded in Section C of the applicable form (DND 4368 or 4369).
- b. Participants may chalk their hands for the evaluation if they choose.
- c. The participant's body position during the evaluation is shown in Figure XXX, and is described as follows:
 - i. Stand erect with both feet flat on the floor, shoulder width apart.
 - ii. Elbow flexed at 90° .
 - iii. Forearm neutral (thumb up), with straight wrist.
 - iv. Hand and forearm in slight shoulder internal rotation, so that the position of the JAMAR[®] is vertical and directly in front of the midline of the body.
- d. During the evaluation, the participant's forearm may not rest on any surface, and the participant is not permitted to flex their core and bring the JAMAR[®] in to their body.
- e. Instruct the participant to apply force by gripping the handle with a single, forceful, maximal effort.

- f. Take measurements of each hand alternatively, and conduct two trials per hand.
- g. Provide the participants with 1 min of rest between trials on each hand, in accordance with Heyward (2006).
- h. Values for each trial on each hand will be recorded to the nearest kg; and
- i. Record and combine the best right-hand value and best left-hand value to give a best-combined handgrip value (Section C.1.b. on DND 4368 or 4369).



Figure XX: Frontal (A) and Sagittal (B) View of the Correct JAMAR® and Body Position for Conduct of the Relative Handgrip

53. Calculation of Relative Handgrip Score

- a. The calculation of the relative handgrip score requires the participant's measured body mass (kg) and combined handgrip value (kg):
 - i. As described previously, the combined handgrip value (kg) is the sum of the best left handgrip value (kg), plus the best right handgrip value (kg).
- b. Use a calculator to enter the two variables of body mass (kg) and combined handgrip value (kg) in the following equation:

$$\text{Relative Hand Grip Score} = \frac{\text{Combined Hand Grip Value (kg)}}{\text{Body Mass (kg) + 20}}$$

- c. Record the participant's relative handgrip score in Section C.1.c. on DND 4368 or 4369, to the nearest hundredth (i.e., two decimal places).

STANDARD LOAD SQUAT PROTOCOL

54. General Information

- d. The Standard Load Squat evaluation is linked to the lower body muscular strength and endurance requirements for the safe and effective completion of specialized CANSOFCOM training and job tasks.
- e. Specialized CANSOFCOM training requires participants to possess the maximal lower body muscular strength to support 100 kg. This will reduce the risk of participants developing local fatigue during specialized CANSOFCOM training and job performance, which in turn will reduce the participant's risk of injury.
- f. The Standard Load Squat evaluation predicts the participant's maximal lower body muscular strength to support the required 100 kg.

55. Standard Load Squat Protocol

- a. In addition to the warm-up/evaluation preparation (previously described), prior to the commencement of the Standard Load Squat, instruct participants to perform 8–10 repetitions of the Standard Load Squat with an unloaded Olympic bar. The purpose of this additional warm-up/evaluation preparation is three-fold:
 - i. Determination of 90° at the rotational axis of the knee: The Evaluator will have the participant squat down until they reach 90° at the rotational axis of the knee. The Evaluator will confirm this angle with a goniometer. This measurement will provide kinesthetic feedback to the participant as to the correct squat depth for the evaluation.
 - ii. Familiarity of movement cadence/timing: The Evaluator will have the participant practice the squat movement repeatedly while moving at the cadence of the metronome, set to 42 b·min⁻¹. This will ensure that participants are

familiar with the movement cadence once the Standard Load Squat commences.

- iii. Safe squatting technique: The Evaluator will assess the participant's squatting technique in order to identify any potential areas of concern and to provide feedback to the participant about safe squatting techniques.
- b. Once the additional warm-up with the unloaded Olympic bar has been completed, have the participant perform the Standard Load Squat using an Olympic bar, weighted to 72 kg.
- c. When ready, the participant will squat down to a 90° angle at the rotational axis of the knee, at the discretion of the Evaluator.
- d. Once in the correct down position, the participant will return to full extension (standing).
- e. Each of these down and up movements will be performed while moving to the cadence of 42 b·min⁻¹, as set by the metronome, where each beat of the metronome will signal the start of a movement in either the up or down direction:
 - i. It is important to ensure that participants are beginning each up and down phase of movement at the beat of the metronome, rather than performing a "fast" up movement (for example), then waiting in the standing up position until the next beat of the metronome. The movement pattern should flow smoothly from one direction to the next.
- f. Do not count incorrect repetitions and advise the participant to correct their technique without stopping or pausing during the exercise.

NOTE: If, after the first 2–3 reps, it is clear that the participant is not moving to the correct cadence and/or the participant is not utilizing safe lifting techniques, the Evaluator will stop the evaluation by having the participant safely rack the Olympic bar. The Evaluator will then provide the participant with 5 min of rest, followed by an additional warm-up on the unloaded Olympic bar in order to have the participant practice moving to the cadence of the metronome and/or focus on safe lifting techniques.

Once the Evaluator feels comfortable with the participant's ability to move to the cadence and/or with the participant's lifting techniques, the participant will be instructed to begin the evaluation a second time with the 72 kg Olympic bar (starting over at section 55.c). Once the participant has been provided this

second opportunity to practice, they will not be afforded any more opportunities to retry the evaluation.

- g. In Section C of the applicable reporting form (DND 4368 or 4369), record the maximum number of correct repetitions that the participant completes before falling behind the required cadence.
- h. Figure XX illustrates the correct starting/up (A) and down (B) positions of the Standard Load Squat.

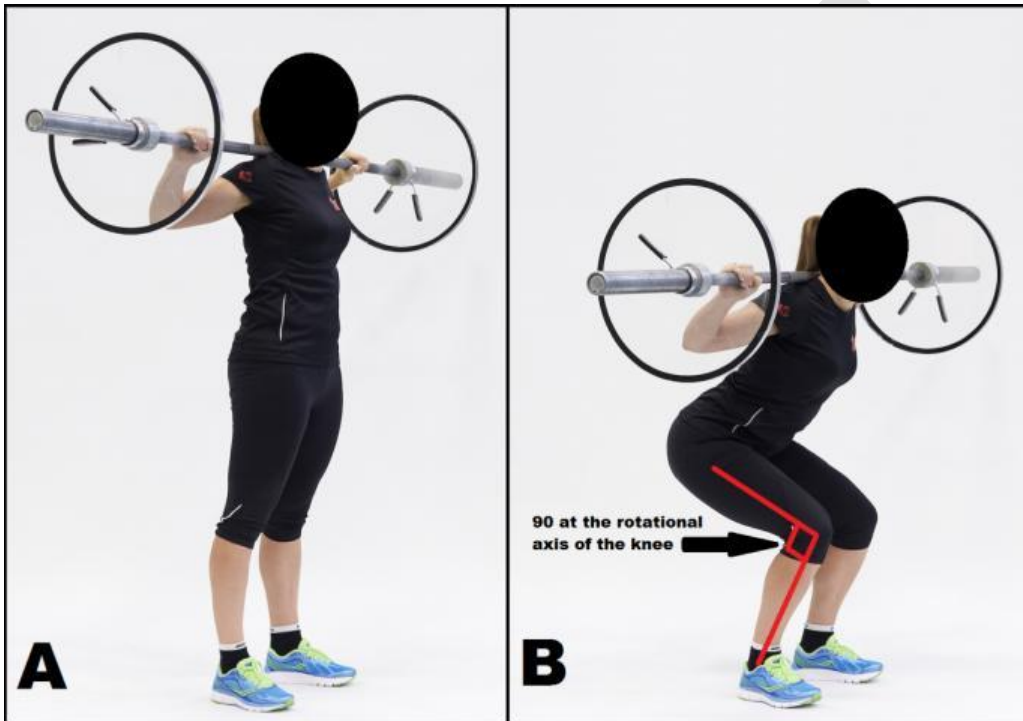


Figure XX: Up (A) and Down (B) Positions for the Standard Load Squat

- i. Depending on the Evaluator's level of experience and comfort administering squats, the Evaluator may or may not choose to provide the participant with additional instruction, as found in Tool XXX.
- j. A mandatory rest of five minutes is required prior to attempting the next evaluation component.

PULL-UPS PROTOCOL

56. General Information

- a. The Pull-ups Evaluation is linked to the upper body muscular strength and endurance requirements for the safe and effective completion of specialized CANSOFCOM training and job tasks.

57. **Pull-ups Protocol**

- a. The Evaluator will instruct the participant to grasp the pull-up bar with an overhand grip (palms facing away from the body), hands shoulder-width apart, and legs crossed and bent at the knees.
- b. Commencing in the down (arms fully extended) position, the Evaluator will instruct the participant to pull themselves up until their chin is completely over the bar.
- c. Once their chin is over the bar, the participant will then lower themselves back down to full extension of the arms in a controlled manner.
- d. The participant will continue to complete these pull-ups in a continuous manner.
- e. Do not count incorrect repetitions and advise the participant to correct their technique without stopping or pausing during the exercise.
- f. Any pauses or breaks in the performance of the exercise will result in an immediate termination of the exercise.
- g. Count and record the number of correct pull-ups completed in Section C of the applicable CANSOFCOM PFS Evaluation Reporting Form (DND 4368 or DND 4369).
- h. A mandatory rest of five minutes is required prior to attempting the next evaluation component.

SIT-UPS PROTOCOL

58. **General Information**

- a. The Sit-ups Evaluation is linked to the torso/core muscular strength and endurance requirements for the safe and effective completion of specialized CANSOFCOM training and job tasks.

59. **Sit-ups Protocol**

- a. The Evaluator will instruct the participant to lie in a supine position on the mat with feet flat on the ground, shoulder-width apart, and knees bent to 90° at the axial rotation of the knee, as measured with the goniometer.
- b. The Evaluator or another participant will hold the participant's ankles to ensure that their heels are in constant contact with the mat.
- c. The Evaluator will instruct the participant to place their hands on the side of their head and to keep them in contact with the head at all times.
- d. The participant's elbows must remain pointed towards the knees throughout the duration of the sit-ups so as to prevent the elbows from flapping.
- e. Once in this ready position, the Evaluator will give the command "standby-standby-go". On the command "go", the Evaluator will start the 1 min timer and the participant will begin the sit-ups.
- f. The participant must sit up off the mat and touch their elbows to the top of the knees, then lower themselves back down to the starting position. It is important to note that the participant must touch both the shoulder blades to the mat between each repetition.
- g. Each touch of the elbows to the knees counts as one complete repetition. The participant will perform as many repetitions as possible within the 1 min. The participant may pause whenever necessary.
- h. Count and record the number of correct sit-ups completed in Section C of the applicable CANSOFCOM PFS Evaluation Reporting Form (DND 4368 or DND 4369).
- i. A mandatory rest of five minutes is required prior to attempting the next evaluation component.

PUSH-UPS PROTOCOL

60. General Information

- a. The Push-ups Evaluation is linked to the upper body muscular strength and endurance requirements for the safe and effective completion of specialized CANSOFCOM training and job tasks.

61. Push-ups Protocol

- a. The Evaluator will instruct the participant to lay in a prone position with their palms on the floor, hands shoulder-width apart, and fingers pointed forward.
- b. Once the participant's hands are in the correct position, the participant will move to the up (arms fully extended) position, ensuring their back is straight, with heels together and head up.
- c. Once in the correct up position, the evaluation will commence.
- d. The Evaluator will instruct the participant to lower themselves down until their elbows are bent to an angle of 90°, so that their elbows, upper arms, and shoulders are in line.
- e. Once in the correct down position, the participant will push themselves back to the up (arms fully extended) position while maintaining a straight back, heels together and head up.
- f. The participant will continue to complete the push-ups in a continuous manner.
- g. Do not count incorrect repetitions and advise the participant to correct their technique without stopping or pausing during the exercise.
- h. Any pauses or breaks in the performance of the exercise will result in an immediate termination of the exercise.
- i. Count and record the number of correct push-ups completed in Section C of the SF Operator PFS Evaluation Reporting Form (DND 4369).
- j. A mandatory rest of five minutes is required prior to attempting the next evaluation component.

20MSR PROTOCOL

62. General Information

- a. The 20MSR Evaluation is linked to the aerobic capacity required for the safe and effective completion of specialized CANSOFCOM training and job tasks. Specifically, participants undertaking specialized CANSOFCOM training must possess a maximal aerobic capacity of 44.0 milliliters per kilogram per minute ($\text{ml}\cdot\text{kg}^{-1}\cdot\text{min}^{-1}$).

This will reduce the risk of a participant developing subjective or objective symptoms of fatigue during training and job performance, which will in turn reduce the participant's risk of injury.

- b. The 20MSR evaluation is a predictor of the maximal aerobic capacity required for the safe and effective completion of specialized CANSOFCOM training and job tasks.

63. **20MSR Protocol**

- c. Unlike the other components of the CANSOFCOM PFS Evaluations, which recommend one-on-one evaluation, the 20MSR may be performed as a group if the Evaluator can effectively monitor all participants within the group.
- d. The Evaluator must be positioned in view of the starting 20 m line, while the Assistant must be positioned in view of the opposite 20 m line.
- e. Participants will start the 20MSR by lining up directly behind the starting 20 m line.
- f. Once the participants are in position, the Evaluator will start the 20MSR audio recording and will ensure that the volume is adequate for all participants to clearly hear.
- g. As prompted by the audio recording, participants will commence the 20MSR on the first "beep" by moving to the far 20 m line prior to the next "beep".
- h. If, at any point, a participant does not reach the 19 m line prior to the "beep", the participant will be instructed to stop the evaluation immediately.
- i. If, at any point, a participant is over the 19 m line but has not reached the 20 m line prior to the "beep", they will receive a "warning". The Evaluator will call out "WARNING" and clearly identify which participant received the warning in a voice clear enough for the participant and Assistant to hear. The participant should turn around and touch the other sideline before the next "beep".
- j. If a participant receives two warnings in a row, this will result in an immediate termination of the evaluation and the Evaluator will record the participant's last completed level on the Reporting Form.

- k. A participant can accumulate an unlimited number of warnings, as long as they do not receive two in a row. However, if it becomes evident that the participant is trying to “play the system” by purposely not attempting to reach the 20 m line, the Evaluator has grounds to terminate the evaluation for that participant.
- l. The 20 m line is considered to be reached once the participant makes contact with the line (i.e., they do not need to completely cross the line).
- m. When changing direction, the participant must pivot and turn in a straight line, no “U-turns” are allowed.
- n. Upon completion/termination of the 20MSR, advise the participant not to leave the evaluation area without permission of the Evaluator.
- o. Record the last level completed by the participant on the 20MSR in Section C of the applicable CANSOFCOM PFS Evaluation Reporting Form (DND 4368 or DND 4369).
- p. When the test is over, encourage the participant to keep walking and remain in the testing zone.

COMBAT SWIM TEST

64. General Information:

- a. The Combat Swim Test has been designed to ensure that participants are capable of swimming a short distance to safety should they end up in the water in their fighting order during amphibious operations, which may occur during specialized CANSOFCOM training and job performance.

65. Combat Swim Test Protocol:

- a. Prior to the administration of the Combat Swim Test, provide participants with the opportunity to familiarize themselves in the water while wearing a combat shirt, combat trousers, combat boots and carrying a replica C-7 rifle. However, local resources, program scheduling and policies will dictate if this is possible, and its frequency.
- b. The participant will be permitted to sling their replica C-7 rifle during the conduct of the Combat Swim Test. However, they will not be permitted to use any additional floatation device.

- c. After participants enter the shallow end of the pool, provide them with the opportunity to try various swimming strokes. Upon completion of this familiarization period, direct participants to exit the pool and move to the deep end.
- d. Once in position on the pool deck at the deep end of the pool, the Combat Swim Test will begin on the command, “stand-by, stand-by, go”, at which point the participant will enter the deep end of the pool by jumping feet first into the water.
- e. After surfacing vertically in the water, the participant will swim a distance of 12.5 m using any style of propulsion. When they reach the 12.5 m mark, they will turn around and swim back to the edge of the pool (no time limit).
- f. During the Combat Swim Test, the participant cannot touch the bottom or sides of the pool. Walking on the bottom of the pool is also strictly prohibited.
- g. If a participant drops their rifle during any portion of the Combat Swim Test, they may retrieve the rifle from the bottom of the pool and continue with the completion of their 25 m swim.

NOTE: If the pool is too deep to allow safe recovery of the rifle, the Evaluator may allow the candidate to restart the test if it is clear that the rifle was not dropped intentionally or due to significant fatigue. This scenario may only occur once during the conduct of the Combat Swim Test, where a second violation will cause a termination and failure of the Combat Swim Test.

- h. Record the outcome of the Combat Swim Test in Section C of the SF Operator PFS Evaluation Reporting Form (DND 4369).

RUCK MARCH PROTOCOL

66. General Information:

- a. The Ruck March has been designed to assess load carriage ability and is reflective of the movement patterns and physical demands that participants will be exposed to during specialized CANSOFCOM training and job performance.
- b. At the Evaluator’s discretion, as many participants as possible may perform the Ruck March simultaneously.

67. Ruck March Protocol:

- a. This evaluation has to be performed outdoors on a paved road, if required. An indoor track is also acceptable.
- b. The participant will stand with both feet behind the starting point (indicated by pylons) and will wait for the instruction to commence the Ruck March.
- c. On the command, “stand-by, stand-by, go”, the Evaluator will start the stopwatch and the participant will start the Ruck March by moving as quickly as they choose for 12 km to the finish line, marked by pylons.
- d. Participants are not permitted to run (at least one foot must remain in contact with the ground at all times). Instead, participants may choose to shuffle.
- e. Once the participant crosses the finish line, the Evaluator will record the total time to the nearest second on the DND 4369.
- f. Additional information pertaining to the Ruck March is as follows:
 - i. Participants may take rest breaks at any point they choose during the evaluation. However, this additional time is part of the total time.
 - ii. Participants may pack their ruck any way they choose, so long as the total weight carried is equal to 35 kg (± 1 kg) and does not include the weight of consumables, such as water.
 - iii. Participants must wear boots that provide high ankle support. Low-cut boots are not permitted.
 - iv. Participants are **NOT** required to wear a helmet or to carry their C-7 rifle during the performance of the Ruck March.

PART VI: PFS EVALUATION RESULTS AND COOL-DOWN

DND 4368 SECTION C – CBRN OPERATOR PFS EVALUATION

Section C: SOIE prerequisite physical fitness evaluation Evaluation de la condition physique prérequis pour le cours IEOS						
1. Relative hand grip - Force relative de préhension Equation - Equation: $c = b / a$						
Body mass (kg) Masse corporelle (kg)		Right hand trial 1 Main droite essai 1		Right hand trial 2 Main droite essai 2		Best right hand Meilleur main droite
						b. Best combined hand grip Meilleur résultat combiné de la force de préhension (kg)
a. Body mass + 20 Masse corporelle + 20		Left hand trial 1 Main gauche essai 1		Left hand trial 2 Main gauche essai 2		Best left hand Meilleur main gauche
						c. Relative hand grip Force relative de préhension
<input type="checkbox"/> Met std (≥ 1.00) - Satisfait la norme (≥ 1.00) <input type="checkbox"/> Did not meet std (≤ 0.99) - N'a pas satisfait la norme (≤ 0.99)						
2. Std load squats Squats avec charge		3. Pull-ups - Tractions à la barre		4. Sit-ups - Redressements assis		5. 20 MSR - CN 20 M
<input type="text"/> Total squats Nbre total de squats <input type="checkbox"/> Met std (≥ 11) Satisfait la norme (≥ 11) <input type="checkbox"/> Did not meet std (≤ 10) N'a pas satisfait la norme (≤ 10)		<input type="text"/> Total Pull-ups Nbre total de tractions à la barre <input type="checkbox"/> Met std (≥ 5) Satisfait la norme (≥ 5) <input type="checkbox"/> Did not meet std (≤ 4) N'a pas satisfait la norme (≤ 4)		<input type="text"/> Total sit-ups Nbre total de redressements assis <input type="checkbox"/> Met std (≥ 40) Satisfait la norme (≥ 40) <input type="checkbox"/> Did not meet std (≤ 39) N'a pas satisfait la norme (≤ 39)		<input type="text"/> Final level Dernier niveau atteint <input type="checkbox"/> Met std (≥ 8) Satisfait la norme (≥ 8) <input type="checkbox"/> Did not meet std (≤ 7.5) N'a pas satisfait la norme (≤ 7.5)

68. Section C is divided into six subsections, one for each of the five CBRN Operator PFS Evaluation components, plus one subsection to indicate the overall result.
69. The subsections are designed to allow the Evaluator to directly record the PFS Evaluation results as the evaluation is administered:
- a. Section C.1. Includes the equation used for the calculation of the Relative Handgrip score, which will be recorded in Section C.1.c.
70. Upon completion of each PFS Evaluation component, the Evaluator must record the result in the box designated for each respective PFS Evaluation component, and must check off the box associated with that result:
- a. Section C.1. (Relative Handgrip):
 - i. Check off “Met std” if the Relative Handgrip score in Section C.1.c. is ≥ 1.00 .
 - or
 - ii. Check off “Did not meet std” if the Relative Handgrip score in Section C.1.c is ≤ 0.99 .
 - b. Section C.2. (Std Load Squats):
 - i. Check off “Met std” if the total Std Load Squats in Section C.2. is ≥ 11 .

or

- ii. Check off “Did not meet std” if the total Std Load Squats in Section C.2. is ≤ 10 .

c. Section C.3. (Pull-ups):

- i. Check off “Met std” if the total Pull-ups in Section C.3. is ≥ 5 .

or

- ii. Check off “Did not meet std” if the total Pull-ups in Section C.3. is ≤ 4 .

d. Section C.4. (Sit-ups):

- i. Check off “Met std” if the total Sit-ups in Section C.4. is ≥ 40 .

or

- ii. Check off “Did not meet std” if the total Sit-ups in Section C.4. is ≤ 39 .

e. Section C.5. (20MSR):

- i. Check off “Met std” if the 20 MSR final level in Section C.5. is ≥ 8 .

or

- ii. Check off “Did not meet std” if the 20 MSR final level in Section C.5. is ≤ 7.5 .

f. Section C.6. (Overall CBRN Operator PFS Evaluation Result):

- i. Check off “Met std” if the participant achieved the performance standard in each of the PFS Evaluation components (i.e., “Met std” is checked off in Sections C.1–C.5).

or

- ii. Check off “Did not meet std” if the participant failed any of the PFS Evaluation performance standards (i.e., “Did not meet std” is checked off at least once in Sections C.1–C.5).

DND 4369 SECTION C – SF OPERATOR PFS EVALUATION

Section C: SOIE prerequisite physical fitness evaluation Evaluation de la condition physique prérequis pour le cours IEOS							
1. Relative hand grip - Force relative de préhension Equation - Equation: $c = b / a$							
Body mass (kg) Masse corporelle (kg)		Right hand trial 1 Main droite essai 1		Right hand trial 2 Main droite essai 2		Best right hand Meilleur main droite	b. Best combined hand grip Meilleur résultat combiné de la force de préhension (kg)
a. Body mass + 20 Masse corporelle + 20		Left hand trial 1 Main gauche essai 1		Left hand trial 2 Main gauche essai 2		Best left hand Meilleur main gauche	c. Relative hand grip Force relative de préhension
<input type="checkbox"/> Met std (≥ 1.00) - Satisfait la norme (≥ 1.00) <input type="checkbox"/> Did not meet std (≤ 0.99) - N'a pas satisfait la norme (≤ 0.99)							
2. Std load squats Squats avec charge		3. Pull-ups - Tractions à la barre		4. Sit-ups - Redressements assis		5. 20 MSR - CN 20 M	
<input style="width: 100px; height: 20px;" type="text"/> Total squats N ^{bre} total de squats		<input style="width: 100px; height: 20px;" type="text"/> Total Pull-ups N ^{bre} total de tractions à la barre		<input style="width: 100px; height: 20px;" type="text"/> Total sit-ups N ^{bre} total de redressements assis		<input style="width: 100px; height: 20px;" type="text"/> Final level Dernier niveau atteint	
<input type="checkbox"/> Met std (≥ 11) Satisfait la norme (≥ 11) <input type="checkbox"/> Did not meet std (≤ 10) N'a pas satisfait la norme (≤ 10)		<input type="checkbox"/> Met std (≥ 5) Satisfait la norme (≥ 5) <input type="checkbox"/> Did not meet std (≤ 4) N'a pas satisfait la norme (≤ 4)		<input type="checkbox"/> Met std (≥ 40) Satisfait la norme (≥ 40) <input type="checkbox"/> Did not meet std (≤ 39) N'a pas satisfait la norme (≤ 39)		<input type="checkbox"/> Met std (≥ 8) Satisfait la norme (≥ 8) <input type="checkbox"/> Did not meet std (≤ 7.5) N'a pas satisfait la norme (≤ 7.5)	

71. Section C is divided in to eight subsections, one for each of the seven SF Operator PFS Evaluation components, plus one subsection to indicate the overall result.

72. The subsections are designed to allow the Evaluator to directly record the PFS Evaluation results as the evaluation is administered:

- a. Section C.1. Includes the equation used for the calculation of the Relative Handgrip score, which will be recorded in Section C.1.c.

73. Upon completion of each PFS Evaluation component, the Evaluator must record the result in the box designated for each respective PFS Evaluation component, and must check off the box associated with that result:

- a. Section C.1. (Relative Handgrip):

- i. Check off “Met std” if the Relative Handgrip score in Section C.1.c is ≥ 1.00 .

or

- ii. Check off “Did not meet std” if the Relative Handgrip score in Section C.1.c is ≤ 0.99 .

- b. Section C.2. (Std Load Squats):

- i. Check off “Met std” if the total Std Load Squats in Section C.2. is ≥ 11 .

or

- ii. Check off “Did not meet std” if the total Std Load Squats in Section C.2. is ≤ 10 .

c. Section C.3. (Pull-ups):

- i. Check off “Met std” if the total Pull-ups in Section C.3. is ≥ 5 .

or

- ii. Check off “Did not meet std” if the total Pull-ups in Section C.3. is ≤ 4 .

d. Section C.4. (Sit-ups):

- i. Check off “Met std” if the total Sit-ups in Section C.4. is ≥ 40 .

or

- ii. Check off “Did not meet std” if the total Sit-ups in Section C.4. is ≤ 39 .

e. Section C.5. (Push-ups):

- i. Check off “Met std” if the total Push-ups in Section C.5. is ≥ 40 .

or

- ii. Check off “Did not meet std” if the total Push-ups in Section C.5. is ≤ 39 .

f. Section C.6. (20MSR):

- i. Check off “Met std” if the 20 MSR final level in Section C.6. is ≥ 9 .

or

- ii. Check off “Did not meet std” if the 20 MSR final level in Section C.6. is ≤ 8.5 .

- g. Section C.7. (Combat Swim Test):
- i. Check off “Met std” if the participant successfully completed the 25 m swim.
- or
- ii. Check off “Did not meet std” if the participant did not successfully complete the 25 m swim.
- h. Section C.8. (Ruck March):
- i. Insert the Ruck March total time in the appropriate hr:min:sec box. When completing this section, ensure that all six hr:min:sec boxes are filled with a number.
 - ii. Check off which performance zone correlates to the SF Operators Ruck March total time. The performance zones are based on the following Ruck March time standards:
 - Check off “Met std” if the total time indicated in Section C.7 is $\leq 02:24:00$ hr:min:sec.
- or
- Check off “Did not meet std” if the total time indicated in Section C.7 is $\geq 02:24:01$ hr:min:sec.
- i. Section C.9. (Overall SF Operator PFS Evaluation Result):
- i. Check off “Met std” if the participant achieved the performance standard in each of the PFS Evaluation components (i.e., “Met std” is checked off in Sections C.1–C.8).
- or
- ii. Check off “Did not meet std” if the participant failed any of the PFS Evaluation performance standards (i.e., “Did not meet std” is checked off at least once in Sections C.1–C.8).

COOL-DOWN

74. A supervised walk within the evaluation area should take place upon completion of the PFS Evaluation, allowing participants to physically

recover. If requested by the participant, time and guidance will be provided for an active recovery with stretching.

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PART VII: PFS EVALUATION DEBRIEF & CERTIFICATIONS OF EVALUATION & UNDERSTANDING

PFS PERFORMANCE DEBRIEF AND OUTCOME

75. The local PSP Fitness Staff must debrief each participant upon completion of their respective PFS Evaluation. The participant must be provided with their scores on each of the PFS Evaluation components that they performed.
76. If a participant achieved the performance standard for each of the PFS Evaluation components specific to the PFS Evaluation they performed, they are considered to possess the minimum physical capacities required to continue with the application process.
77. If a participant did not achieve the performance standard on one or more of the PFS Evaluation components specific to the PFS Evaluation they performed, they are considered to **not** possess the minimum physical capacities required to continue the application process:
 - a. A participant who fails to achieve the established standard(s) may be re-tested up to two times during any given recruiting period.
 - b. Re-testing shall be conducted after an appropriate period of training. Typically, re-testing should occur after a minimum of 30 days of training; however, common sense must prevail.

NOTE: If a participant is still unsuccessful after their second re-test, their Unit may make an application to the respective CANSOFCOM Unit's recruiting office for an additional testing date. This would only be done in special situations where an applicant has come extremely close to meeting the respective minimal CANSOFCOM PFS Evaluation standards on previous attempts. The respective CANSOFCOM Unit's Personnel Selection Officer will be the approving authority on the granting of any additional testing attempts.

CERTIFICATIONS OF EVALUATION & UNDERSTANDING

78. **DND 4368 & 4369 Section D – Certification of Evaluation:**
 - a. The Evaluator will print and sign their name in the space provided.

Section D: Certification of evaluation - Attestation d'évaluation

Evaluator name (<i>print</i>) - Nom de l'évaluateur (<i>en lettres moulées</i>)	Evaluator signature - Signature de l'évaluateur

79. DND 4368 & 4369 Section E – Certification of Understanding:

- a. The participant (member) must sign and date their acknowledgement of the PFS Evaluation results. In cases where the participant refuses to sign, the Evaluator must note “member refused to sign” in this section.

Section E: Certification of understanding - Attestation

I acknowledge the above fitness evaluation results. - Je reconnais les résultats de l'évaluation de la condition physique.		
_____	2 0	/ /
Signature of member - Signature du militaire	Date - (YYAA)	(MM) (DJ)

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PART VIII: PROCESSING PFS EVALUATION INFORMATION

DND 4368 & 4369

80. Each respective PFE Evaluation Reporting Form will be the only form used to record participant's PFS Evaluation results. In accordance with the Privacy Act, once completed, both the DND 4368 and DND 4639 are Protected A documents and must be treated as such.
81. Completed DND 4368 & 4369 forms will be distributed in accordance with the following procedures:
 - a. Copy 1: Personnel Selection Officer (PSO)
 - b. Copy 2: PSP Section
 - c. Copy 3: Member

APPENDIX A: SYMBOLS, ACRONYMS & ABBREVIATIONS

°	Degree(s)
>	Greater than
≥	Greater than or equal to
<	Less than
≤	Less than or equal to
%	Percent
1-RM	One-Repetition Maximum
20MSR	20 Metre Shuttle Run
ACSM	American College of Sports Medicine
AED	Automated External Defibrillator
BP	Blood Pressure
b·min ⁻¹	Beats per minute
C	Celsius
CAF	Canadian Armed Forces
CANSOFCOM	Canadian Special Operations Forces Command
CBRN	Chemical, Biological, Radiological and Nuclear
CEP	Certified Exercise Physiologist
CFMWS	Canadian Forces Morale and Welfare Services
CJIRU	Canadian Joint Incident Response Unit
cm	centimetre(s)
CO	Commanding Officer

Comd	Commander
CPR	Cardio-Pulmonary Resuscitation
CPT	Certified Personal Trainer
CSEP	Canadian Society of Exercise Physiology
CSOR	Canadian Special Operations Regiment
DAOD(s)	Defence Administrative Orders and Directive(s)
DFit	Directorate of Fitness
DND	Department of National Defence
DOB	Date of Birth
DWAN	Defence Wide Area Network
EAP	Emergency Action Plan
kg	kilogram(s)
m	metre(s)
MEG	Mission Essential Gear
MO	Medical Officer
MFSR	Manager Fitness, Sports, and Recreation
min	minute(s)
ml·kg ⁻¹ ·min ⁻¹	millilitres per kilogram per minute
mmHg	millimetres of mercury
MOSID	Military Occupation Structure Identification
CMPC	Chief Military Personnel Command
OPI	Office(s) of Primary Interest
PHA	Periodic Health Assessment

PSO	Personnel Selection Officer
PSP	Personnel Support Programs
SOIE	Special Operations Insertion and Extraction
SF	Special Forces
Reps	Repetitions
x	Times

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**TOOL 1: DND 4368 – CBRN OPERATOR
PHYSICAL FITNESS SCREENING EVALUATION
REPORTING FORM**

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**TOOL 2: DND 4369 – SF OPERATOR PHYSICAL
FITNESS SCREENING EVALUATION REPORTING
FORM**

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TOOL 3: BLOOD PRESSURE PROCEDURES

GENERAL

1. Have the participant sit for five minutes with their back against the chair rest, feet flat, legs and ankles uncrossed, and their left arm comfortably supported.
2. Ensure that the participant's clothing does not impede blood flow. Ask the participant to change their shirt if required.
3. Choose an appropriately sized blood pressure (BP) cuff and apply it to the participant's left arm.
4. Place the cuff around the bare left upper arm with the lower margin two or three centimetres (cm) above the antecubital space (bend of the elbow), with the upper edge of the cuff level with the heart.
5. Wrap the cuff evenly around the arm, tightly enough that you can slip two fingertips under the cuff's top edge.

Manual BP Procedures

6. We recommend that Evaluators and Health Care Providers use the following procedure for manually measuring BP:
 - a. Locate and note the brachial artery and the antecubital space by palpation.
 - b. Position the stethoscope in your ears with the earpiece pointing forward.
 - c. Locate the radial artery.
 - d. Close the valve on the air pump by turning the thumbscrew in a clockwise direction until it is tight.
 - e. Inflate the cuff quickly until the radial artery pulse can no longer be felt. Continue to inflate the cuff to a level **20 to 30 mmHg above** the level of the radial pulse (normally not above 180 mmHg).
 - f. Quickly position the diaphragm of the stethoscope over the brachial artery. Apply a minimum amount of pressure on the diaphragm of the stethoscope so as not to distort the artery. The diaphragm

should be in complete contact with the skin. The stethoscope should not touch the cuff or its tubing.

- g. Release the cuff pressure at a rate of approximately **2 mmHg per sec.**
- h. Establish the systolic BP by listening for the first perception of sound (Korotkoff sound).
- i. Note the exact numerical line on the scale where you hear this sound.
- j. Establish the diastolic BP when the sounds stop their tap-like quality and are fully muffled.
- k. Deflate the cuff to zero pressure and remove it from the participant's arm.

Automatic BP Procedure

- a. Instruct the participant to sit very still and to not move their arm, hand, fingers or body during the measurement of the BP. Any movement could produce a false measure of the BP or prevent the automatic BP machine from reading the BP.
- b. Press the button to start the machine.
- c. Once the automatic BP machine has finished measuring the participant's BP, remove the cuff from the participant's arm.

NOTE: Consult the automatic BP user manual for any error messages.

BLOOD PRESSURE RESULTS

7. In the event that the pre-evaluation systolic BP is **higher than 150 mmHg** and/or the pre-evaluation diastolic BP is higher than 100 mmHg, have the participant rest quietly for five minutes before repeating the measurement. If, after two readings, the participant's pre-evaluation systolic BP and/or pre-evaluation diastolic BP are still too elevated, do not allow the participant to perform the PPFE. Refer the participant to their Health Care Provider.
8. A participant who has a pre-evaluation BP between 141/91 mmHg and 150/100 mmHg is permitted to perform the PPFE without restrictions.

9. The Evaluator will advise the participant that their BP reading is slightly above the normal range and will encourage them to consult with their Health Care Provider.
10. Verbally tell the participant that there is no cause for alarm and that consulting a Health Care Provider serves as a simple safety precaution.

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TOOL 4: PFS EVALUATION SCRIPTS

OVERVIEW

1. The purpose of the following script is to provide the Evaluator with a standardized explanation of each CANSOFCOM PFS Evaluation protocol.

RUCK MARCH SCRIPT

2. The purpose of the Ruck March as part of the Physical Fitness Screening Evaluation for CSOR is to assess your load carriage ability, as reflective of specialized CANSOFCOM training and essential SF Operator job tasks.
3. The Ruck March is laid out preferably over an outdoor 12 km paved road, which you must march along to achieve the standard. If required, you can use an indoor track.
4. Prior to the start of the march, you will need to ensure that the total weight of your ruck is 35 kg, plus or minus 1 kg, and that the weight does not include consumables such as water.
5. To ensure your weight is correct, you will step on the weigh scale provided by the Evaluator without your ruck. The Evaluator will record your weight without your ruck.
6. You will then step off the scale, pick up your ruck, and step back on the scale. The Evaluator will record your weight including your ruck.
7. If the Evaluator determines that the total weight of your ruck is not equal to 35 kg, plus or minus 1 kg, you will be required to adjust your ruck accordingly, by adding or subtracting weight, after which you will repeat the weighing process.
8. Once the Evaluator has determined that the total weight of your ruck is equal to 35 kg, plus or minus 1 kg, you will put on your ruck and prepare to start the evaluation.

Any questions? (*Answer Any Questions*)

9. You will start the evaluation by standing with your entire body behind the start line, as indicated by the pylons.
10. On the command, “standby-standby-go”, the timer will start and you will march as quickly as you choose for a total of 12 km to the finish line, as marked by the pylons.

11. Ensure you have drinking water available throughout the evaluation.
12. Once you have completely crossed the finish line, the timer will stop, your time will be recorded and you may remove your equipment.
13. You are advised to conduct a cool-down upon completion of the Ruck March.
14. Additional rules for the Ruck March are as follows:
 - a. You may move as quickly as you choose during the Ruck March; however, you will not run, which means at least one foot must remain in contact with the ground at all times. Instead, you may “shuffle”.
 - b. You may stop and rest at any time; however, all rest time will be included in your total Ruck March performance time.
 - c. If you knock over or bump a pylon at the start or finish line, replace the pylon to its original position before continuing.

Any questions? (*Answer Any Questions*).

TOOL 5: WARM-UP/EVALUATION PREPARATION EXERCISES

GENERAL

1. Prior to the PFS Evaluation, participants must undergo a warm-up and evaluation preparation lead by an Evaluator. The Evaluator may or may not choose to provide the participant with the following specific warm-up/evaluation preparation exercises:
 - a. Myofascial release techniques (i.e., foam rolling) including:
 - i. Adductor smash
 - ii. Hamstring smash and move
 - iii. Quad smash and move
 - iv. Glute smash
 - v. Iliotibial band smash
 - vi. Overhead tissue smash
 - vii. T-Spine smash extension with side to side
 - b. Light aerobic activity (10–12 min) including:
 - i. 8–10 min spinning on an exercise bike or light jogging
 - ii. 20 m x walking knee lifts
 - iii. 20 m x walking butt kicks
 - iv. 20 m x walking Frankenstein
 - v. 20 m x side steps, alternating directions
 - vi. 20 m x carioca (cross-overs), alternating directions
 - vii. 20 m x walking lunge with twist
 - viii. 20 m x progressive jogging (3–5 times)

- c. Dynamic movements (5–8 min) that reflect the movement patterns used during the PPFE. This preparation is to be performed in a smooth and controlled manner, going to full range of motion and using correct technique. Dynamic movements to include:
- i. 8 x supine bridges
 - ii. 8 x squat to stand
 - iii. 8 x frog squats
 - iv. 8 x adductor dips (each side)
 - v. 8 x split stance mobilization (each side)
 - vi. 8 x Spiderman with overhead reach (each side)
 - vii. 8 x scapular wall slides
 - viii. 8 x roller angels
 - ix. 8 x quadruped extension and rotation
 - x. 8 x single arm windmills (each side)
- d. An additional 2–5 min warm-up period is recommended to be completed at the participant's discretion.

TOOL 6: ADDITIONAL INFORMATION FOR WARM-UP

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TOOL 7: ADDITIONAL INSTRUCTION FOR ADMINISTRATION OF THE STANDARD LOAD SQUATS

GENERAL

1. Depending on the Evaluator's level of experience and comfort administering squats, the Evaluator may or may not choose to provide the participant with the following additional instruction when administering the Standard Load Squats protocol:
 - a. When removing the Olympic bar from the rack: Squeeze the shoulder blades together creating a "shelf" for the Olympic bar and rest it on the shelf, then lift the Olympic bar and slowly step backwards.
 - b. Preparing to squat: Stand with feet shoulder-width apart, toes pointing forwards, back erect, and head in a neutral position. "Screw" the feet into the floor by engaging the glutes and abdominals to brace the spine and imagine using the hands to break the Olympic bar over the shoulders. This will help set a stable upper body position.
 - c. Squatting: Press the hamstrings back, hinge slightly forwards at the hips and squat down until the 90° angle at the rotational axis of the knee is achieved. Maintain a neutral head position with the knees aligned over the feet and the shins remaining vertical.
 - d. Returning to standing: Return to the standing position by pressing the feet into the floor, extending the hips and knees while maintaining a stable upper body.
 - e. Racking the bar: Once completed, walk directly forward without turning the head and/or torso to watch the position of the Olympic bar. Turning the head and/or torso during this time will compromise the integrity of the body position. Walk forward until the Olympic bar makes firm contact with the squat rack, and then lower the Olympic bar onto the rack.

TOOL 8: ADDITIONAL REFERENCES

American College of Sports Medicine (ACSM) (2014). *ACSM's Guidelines for Exercise Testing and Prescription, 9th Edition*. Wolters Kluwer/Lippincott Williams & Wilkins;

Canadian Society for Exercise Physiology (CSEP) (2013). *CSEP-PATH: Physical Activity Training for Health*. CSEP, Ottawa, Canada;

Government of Canada (1985). *Bona Fide Occupational Requirement and Bona Fide Justification: Interim Policies and Explanatory Notes*. Ottawa, Ontario, Canada: Canadian Human Rights Commission;

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