

**PHYSICAL FITNESS STANDARDS AND
PROGRAMS FOR THE CANADIAN FORCES
A CANADIAN FORCES PERSPECTIVE
FOR
CISM INTERNATIONAL SYMPOSIUM**

by

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OPERATIONAL PHYSICAL FITNESS



RESEARCH AND DEVELOPMENT OF CF PHYSICAL FITNESS STANDARDS (CFAO 50-1)

- **Cannot be based on arbitrarily set pass/fail criteria**
- **Measurement tools and standards shall meet appropriate scientific criteria and military performance requirements**
- **Shall be researched to ensure that they are safe, appropriate and scientifically validated**

CF EXPRES PROGRAM



**SCIENTIFIC AND
HUMAN RIGHTS
UMBRELLA**

STANDARDS

PROGRAMS

UNIT/INDIVIDUAL TRAINING

CF EXPRES PROGRAM



GENERAL

ENVIRONMENTAL

TRADE

CF EXPRES PROGRAM



**SELECTION
STANDARDS**

GENERAL

-Recruit Applicants

TRADE

-SAR Techs

-PARA

-JTF

-Divers

-FF

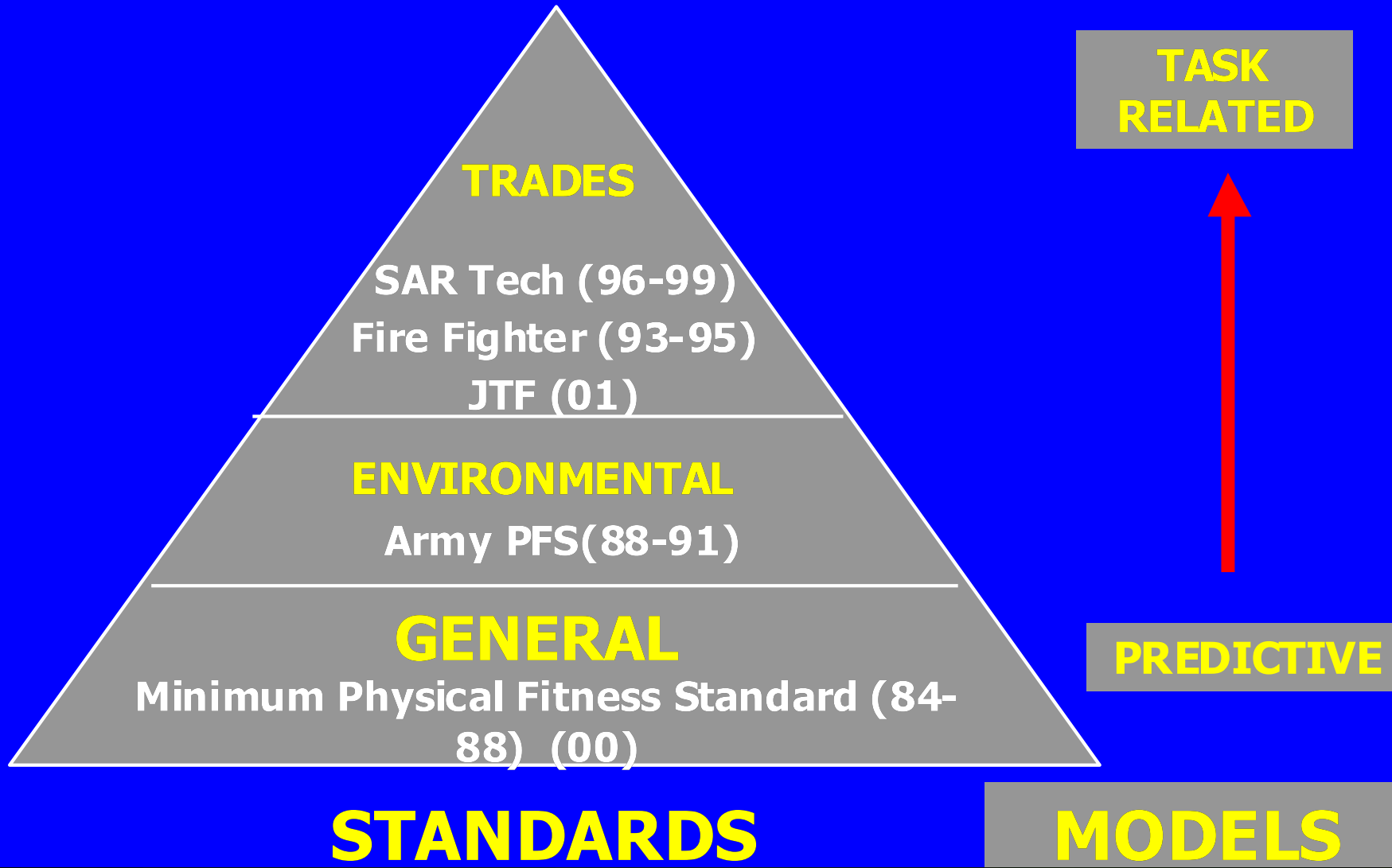
-Rangers



PHYSICAL FITNESS MAINTENANCE STANDARDS



CF EXPRES PROGRAMS



RATIONALE FOR THE DEVELOPMENT OF BONA FIDE PHYSICAL FITNESS STANDARDS FOR CANADIAN FORCES

SAFETY

COST-EFFECTIVENESS

VALIDITY & RELIABILITY

USER SATISFACTION

HUMAN RIGHTS LEGISLATION

BONA FIDE OCCUPATIONAL

REQUIREMENTS(BFOR)

OBJECTIVE BASIS OF BFOR

Must consider existing:

- scientific data**
- empirical studies**
- expert opinion**
- detailed nature of duties to be performed**
- conditions existing in the workplace**

PURPOSE OF STANDARDS

- Assess physical operational readiness;**
- Take corrective action for the unfit by providing programs;**
- Determine effectiveness of training programs; and**
- Act as goals for all personnel.**

WHAT DO STANDARDS GIVE US?

- Reasons for training**
- Achievable goals**
- Rationale for facilities and staff
to support the programs**
- Operational function
measurement**

DEVELOPMENT OF TEST OR TEST BATTERY

Need to establish job-relevance

Can be established through content, construct or criterion validation

A given measure is valid to the extent that it corresponds to, or predicts, the human behavior of interest

LAWS AND GUIDELINES FOR OCCUPATIONAL REQUIREMENTS

Canada



**Legislated
Federal/Provincial**



Human Rights Commission

MPFS 2000 Common tasks



1. Entrenchment dig



2. Land Evacuation



MPFS 2000 Common Tasks



3. Low High Crawl



4. Sandbag Carry



MPFS 2000 Common Tasks

5. Sea Evacuation



6. Jerry can Lift



SELECTION VS MAINTENANCE PF STDS

Maintenance Standards

purpose is to evaluate incumbents

Selection Standards

**purpose is to select the best or most
appropriate candidates for training**

**it is recommended that applicants be
held to a higher std because of an
abundance of evidence that fitness
decreases with age and higher levels
of fitness translate to better
performance at reduced risk**

**MODEL FOR THE
DEVELOPMENT OF BONA
FIDE PHYSICAL
MAINTENANCE STANDARD**

Literature Review



Literature Review



Physical Demands Analysis



Literature Review

```
graph TD; A[Literature Review] --> B[Physical Demands Analysis]; B --> C[Identification of "Most Demanding" and "Most Representative" tasks  
Expert Panel];
```

Physical Demands Analysis

**Identification of "Most Demanding" and
"Most Representative" tasks
Expert Panel**

Literature Review

```
graph TD; A[Literature Review] --> B[Physical Demands Analysis]; B --> C[Identification of "Most Demanding" and "Most Representative" tasks  
Expert Panel]; C --> D[Circuit];
```

Physical Demands Analysis

**Identification of "Most Demanding" and
"Most Representative" tasks
Expert Panel**

Circuit

Literature Review



Physical Demands Analysis



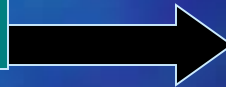
**Identification of "Most Demanding" and
"Most Representative" tasks
Expert Panel**



Circuit



Scientific Check



Literature Review

Physical Demands Analysis

**Identification of "Most Demanding" and
"Most Representative" tasks
Expert Panel**

Circuit

Reliability

Scientific Check

**Fitness test
vs Circuit**

Literature Review

Physical Demands Analysis

**Identification of "Most Demanding" and
"Most Representative" tasks
Expert Panel**

Circuit

Reliability

Scientific Check

**Fitness test
vs Circuit**

**Physiological
Evaluation**

Literature Review

Physical Demands Analysis

**Identification of "Most Demanding" and
"Most Representative" tasks
Expert Panel**

Circuit

Reliability

Scientific Check

**Fitness test
vs Circuit**

**Physiological
Evaluation**

Approve Circuit

Literature Review

Physical Demands Analysis

**Identification of "Most Demanding" and
"Most Representative" tasks
Expert Panel**

Circuit

Reliability

Scientific Check

**Fitness test
vs Circuit**

**Physiological
Evaluation**

**Checks on Segments
of the CF**

Approve Circuit

**Evaluate Age and
Gender Effects**

Literature Review

Physical Demands Analysis

**Identification of "Most Demanding" and
"Most Representative" tasks
Expert Panel**

Circuit

Reliability

Scientific Check

**Fitness test
vs Circuit**

**Physiological
Evaluation**

**Checks on Segments
of the CF**

Approve Circuit

**Evaluate Age and
Gender Effects**

Develop Performance Objectives

TASK RELATED MODEL

(Task Simulations/Work Samples)

ADVANTAGES

- easily understood
- job related/specific
- operational capability measurement
- discriminates well between who can/cannot do the job
- perception of reduced redress of grievances/challenges

DISADVANTAGES

- skill and fitness may be confounded
- may be dependent upon prior learning/skill
- does not measure physical fitness

PREDICTIVE TESTS MODEL (Physical Fitness)

ADVANTAGES

measures physical fitness

is not dependent on prior learning

DISADVANTAGES

**requires more effort to document job
relatedness**

**does not discriminate well between who
can/cannot do the job**

**perception of increased redress of
grievances/challenges**

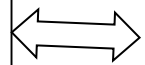
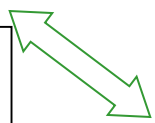
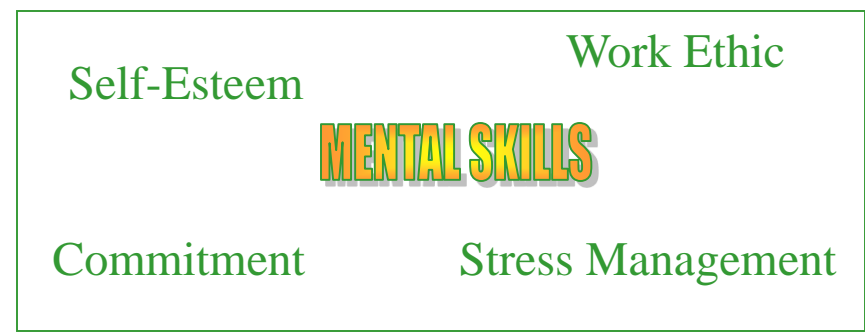
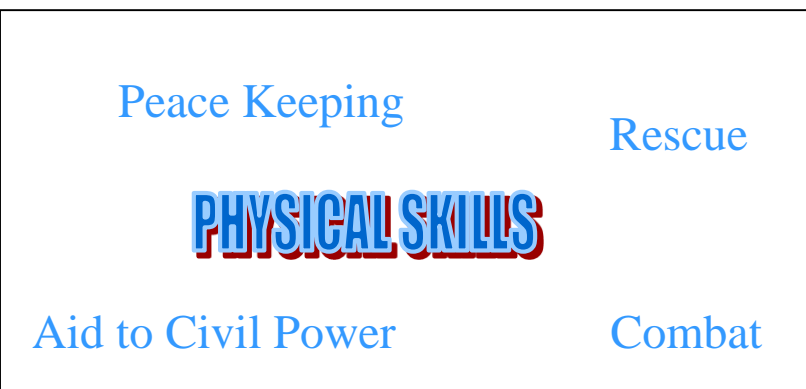
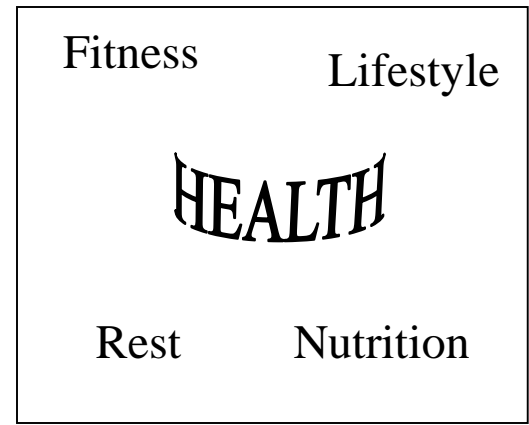
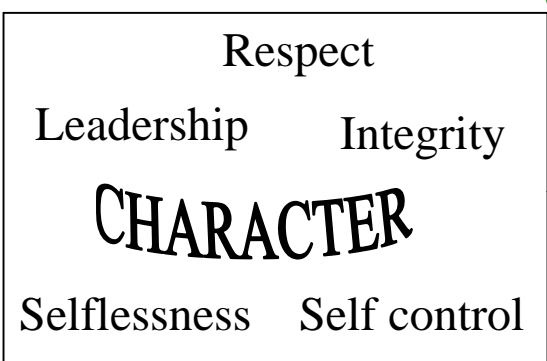


**MODEL
FOR ESTABLISHING
PHYSICAL FITNESS
TRAINING PROGRAMS**

13km March Casualty Evacuation

FIT TO FIGHT

Ammo Box Lift Trench Dig



Aerobic Power **13km March**
2hr 26min 20s

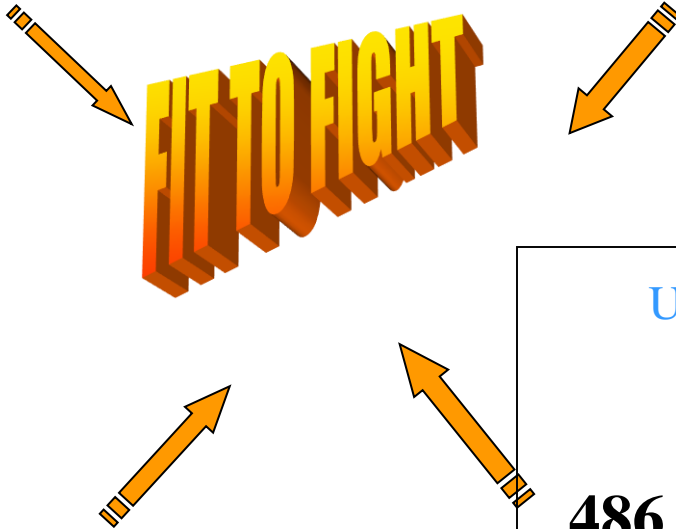
Upper Body and
Core Strength

Lower Body Power

Aerobic Power
Casualty Evacuation
100m < 60s

Lower body
Strength

Upper Body and
Core Strength



Upper Body and
Core Strength

Ammo box Lift
48 boxes in
300s

Flexibility

Lower body
Strength

Upper Body and
Core Strength

Trench Dig
.486 cubic m < 6 min

Lower body
Strength

Flexibility

A MODEL TO LINK ARMY FITNESS PROGRAMS TO GOALS AND OBJECTIVES

PROGRAMS

THE ARMY FITNESS PROGRAMS

- GARRISON
- FIELD
- RAPID DEPLOYMENT
- 6 WEEK
- 3 WEEK

(see AFM for details)

FITNESS OBJECTIVES

1. Aerobic Power
2400m < 10.5 min
 2. Aerobic Capacity
5 km < 25min
 3. Lower Body Strength
Squats: 80 kg X 14
 4. Upper Body Strength
Bench Press: 65kg X 22
 5. Abdominal Core
Curl ups X 75
 6. Lower Body Power
Long Jump: 250 cm
40m sprint: 5.6 s
 7. Flexibility
- (see AFM for details)

TASK OBJECTIVES

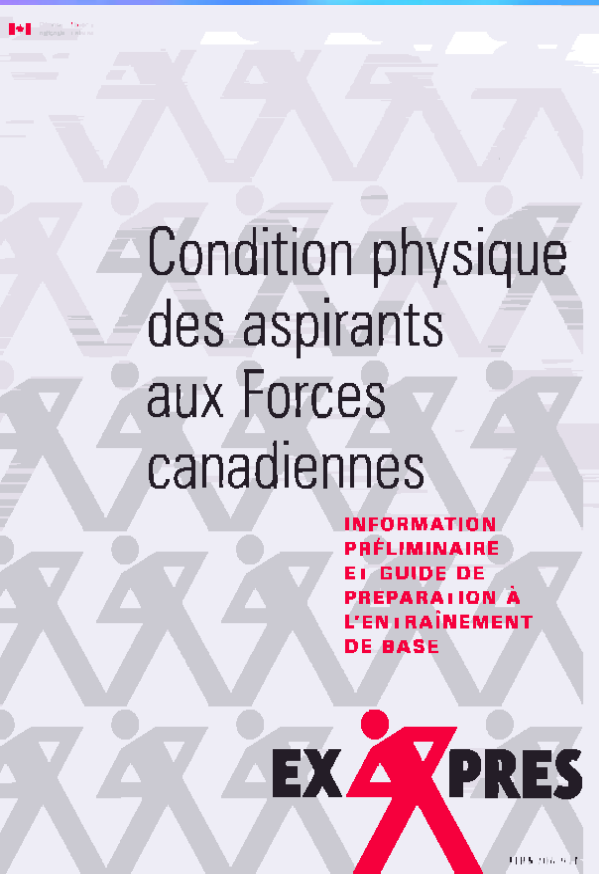
- 13km March
24.5kg <2hr:26min:20s
 - Casualty Evacuation
100m <60s
 - Ammunition Box Lift
20.9kg X 48 < 5 min
 - Trench Dig
.486cu. m < 6 min
- (see AFM for details)

GOAL

**FIT
TO
FIGHT**



PF Testing at Recruit Centers



All applicants are provided:

‘**Applicant Physical Fitness Testing**’

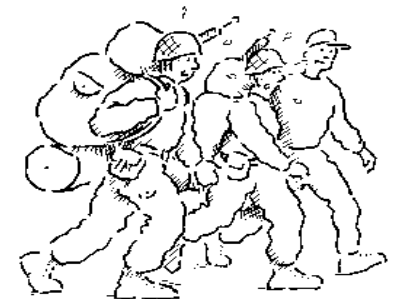
and/or

‘**Failing to Prepare is Preparing to Fail**’

Those selected are tested using the MPFS test

Failing to Prepare...
is Preparing
to Fail

PHYSICAL FITNESS
SUPPLEMENT FOR
COMBAT ARMS
APPLICANTS





The EXPRES Programme Training Guides

- Nautilus
- Cross-Country Skiing
- Cycling
- Jogging
- Rope-Skipping
- Stationary Cycling
- Strength and Muscular Endurance
- Swimming
- Walking

To view the contents of a booklet click on the walking booklet, otherwise select continue

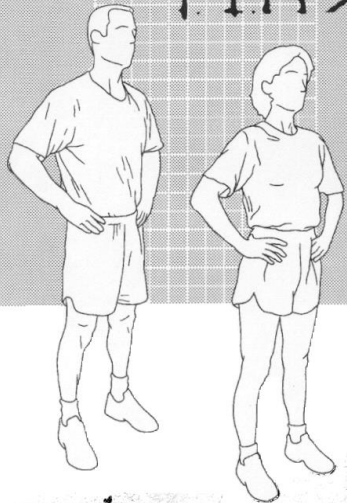
Exercise Prescription

Environment
specific
exercise
prescription
material

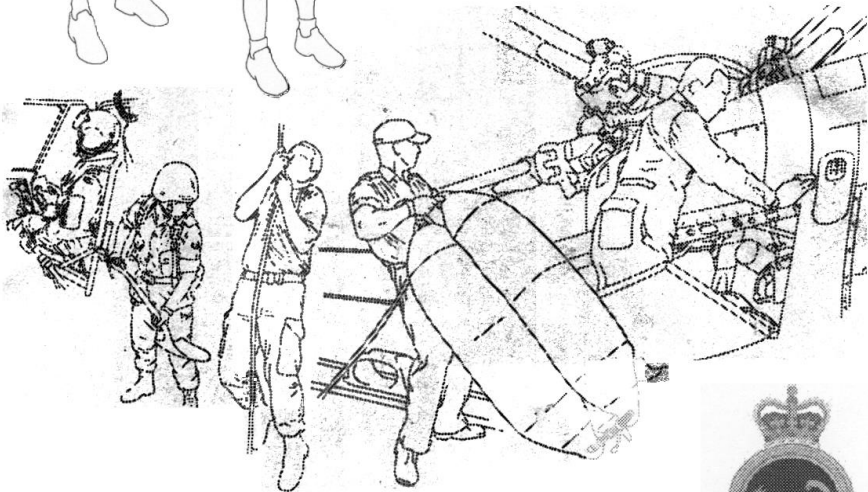


Recruit School Manual

THE FUNDAMENTALS OF PHYSICAL TRAINING



H A N D B O O K



**CANADIAN FORCES
RECRUITING, EDUCATION AND
TRAINING SYSTEM**



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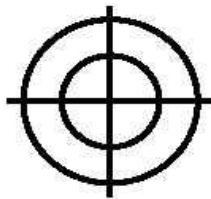
Army Fitness Manual



Land Force Command

ARMY

Fitness Manual



B-GI-382-003/FP-001



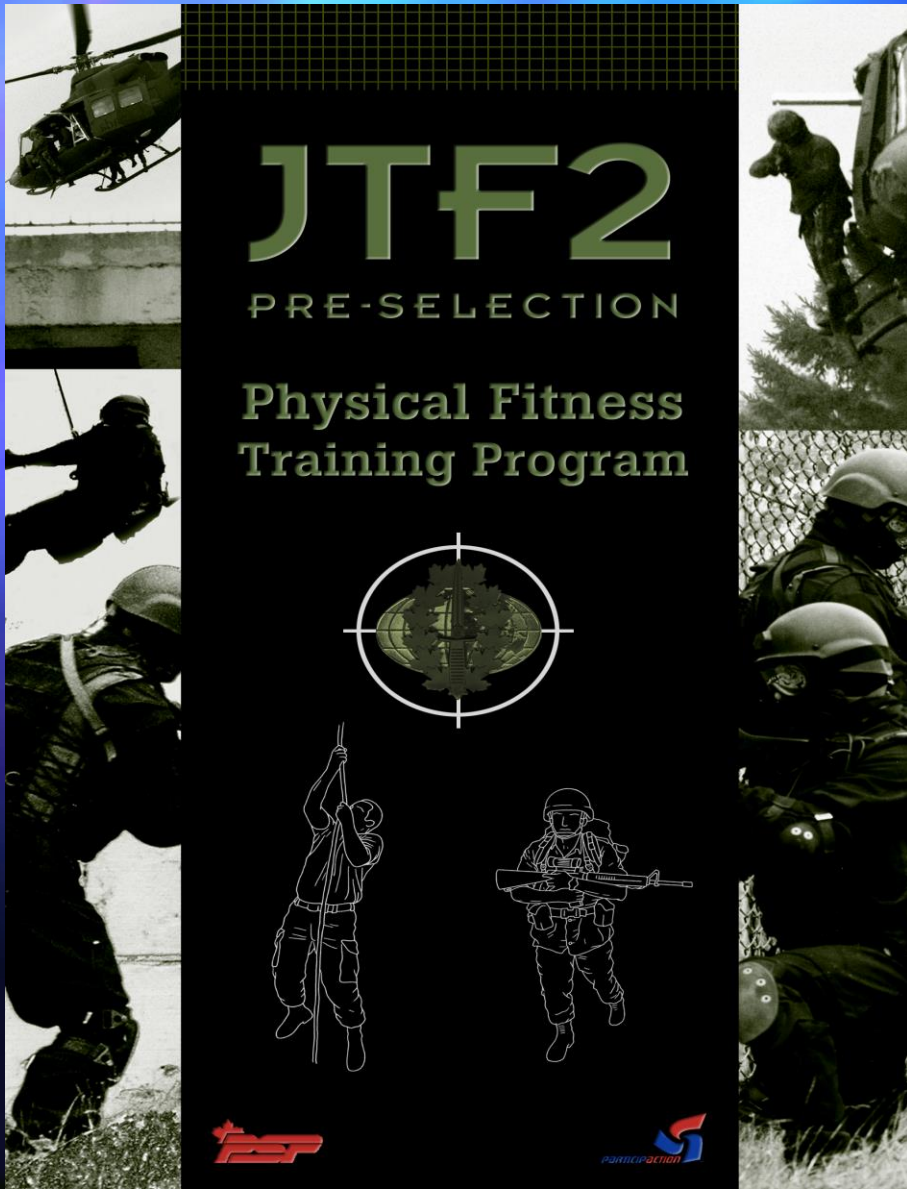
Land Force Command

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JTF 2 Pre-Selection



JTF2

PRE-SELECTION

Physical Fitness Training Program



JTF 2 PRE-SELECTION
PHYSICAL FITNESS TRAINING PROGRAM



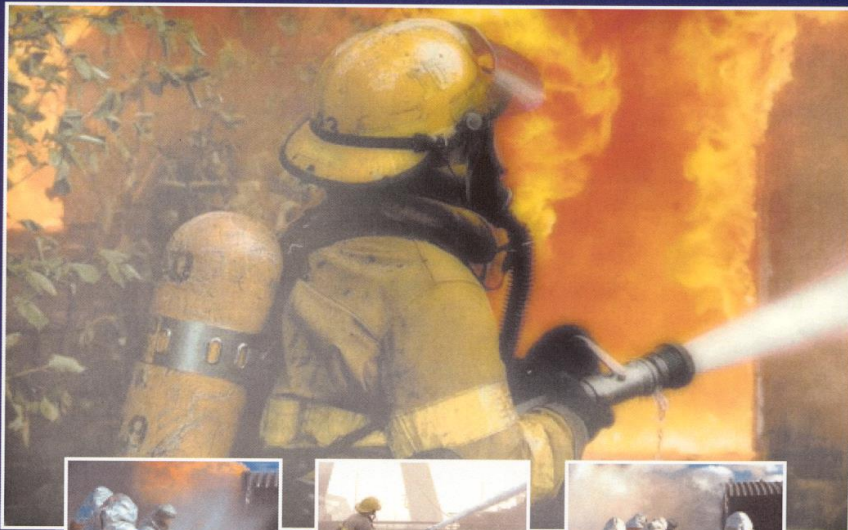
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Fighting Fires with Fitness

Fighting FIRE with Fitness

A MANUAL SUPPORTING THE FIRE FIGHTER PHYSICAL FITNESS MAINTENANCE PROGRAM



CANADIAN FORCES
PERSONNEL SUPPORT AGENCY



SISIP RARM

CANEX



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Canadian Forces Fitness Model



Fitness Programs and Standards for Today's Canadian Forces Members



*Ergonomics Research Group
Queen's University
Kingston, Ontario*



Canada