

**FITNESS +**

FUNCTIONAL  
STRENGTH & CONDITIONING  
**PROGRAM**



Royal Canadian  
Mounted Police    Gendarmerie royale  
du Canada

Canada



**TITLE:** Functional Strength & Conditioning Program

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## A WORD FROM THE COMMISSIONER

I believe that a healthy mind in a healthy body is most important in today's law enforcement world.

Experts will agree that a police officer's essential qualities, such as health, enable him or her to face the challenges of the profession and provide quick responses in the line of duty. To successfully achieve the mission to maintain peace and keep citizens safe and secure, an officer must have superior physical and mental abilities.

Fitness is a key element to the health of peace officers. It allows us to perform everyday life activities at a high energy level. It reduces stress, thus allowing us to improve our performance at work. From a professional perspective, fitness is especially important for peace officers. It can make a difference in our ability or inability to perform high intensity tasks in critical situations.

That is why I invite you to make good use of the exercise plans offered to you in this document. They are equally intended for people who have not been exercising for a long time and for those who have never stopped training. In order to make the program available to everyone, our experts have identified four levels of training. Level one is for people wanting to go back to physical exercise and to a more active lifestyle. Level two focuses on improving fitness and meeting the minimum physical requirements for police work. Levels three and four are for people who are already fit and pursuing higher goals for athletic performance and operational purposes.

The Royal Canadian Mounted Police Functional Strength and Conditioning Program has been designed by experts in exercise physiology who work with thousands of police officers and fellow colleagues from coast to coast. The training plans they have developed require a minimum of time and equipment and can be performed virtually anywhere.

I am proud to share this tool with the entire membership and with all our law enforcement friends and partners. The more people get physically fit, the better our society will be. By taking good care of your health and maintaining a balanced lifestyle, you will remain fit for duty and fit for life. I wish everyone an enjoyable training experience!

The signature of Bob Paulson, Commissioner of the Royal Canadian Mounted Police, written in a cursive script.

**Bob Paulson**

Commissioner - Royal Canadian Mounted Police

# BIOGRAPHY



**Luc Poirier** obtained a degree in kinesiology from the University of Sherbrooke in 2001. He joined the Royal Canadian Mounted Police in 2003 as a Division Fitness & Lifestyle Advisor (DFLA) for “C” Division (Quebec). Based in Montréal, Luc works with a population of 1,000 police officers and 600 support employees across the province.

His role is to administer police occupational tests to members and recruits, to prescribe fitness plans to employees and specialized units and to create and support initiatives promoting fitness and wellness in the workplace. Luc also attends various events in Canada and the US, where he draws on his extensive experience in his capacity as guest speaker on Strength & Conditioning.

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**Sylvain Lemelin** was hired by the RCMP in 1996 as a Division Fitness & Lifestyle Advisor. He is a University of Manitoba graduate who completed his Bachelor's degree in Physical Education in 1992 and his Master of Science degree in Biomechanics in 1995.

He is also a Certified Exercise Physiologist through the Canadian Society for Exercise Physiology and a Certified Strength and Conditioning Specialist through the National Strength and Conditioning Association. One of Sylvain's passions is related to preparing individuals for optimal human performance during various physical demands related to: athletic competition, the activities of daily living and work related tactical situations. As a former member of the University of Manitoba Wrestling team and a current athlete in training, Sylvain brings both knowledge and experience on how to prepare employees for whatever their physical challenge might be.

**Sylvain Lemelin, MSc, CEP, CSCS**

Division Fitness & Lifestyle Advisor / Division Training Services – RCMP (Manitoba)

# TABLE OF CONTENTS

## USER GUIDE

Introduction.....	9
Questions and Answers.....	10
How to Select a Program Level? .....	11
Level 1 Program.....	12
Level 2 Program.....	13
Level 3 Program.....	14
Level 4 Program.....	15
Exercise Safety: Preventing Injuries .....	16
<b>APPENDICES</b>	
1. Terminology .....	18
2. PAR-Q+ .....	20
3. Dynamic Warm-Up.....	21
4. Cool-down and Stretching.....	24
5. Log Sheet.....	26
6. PARE.....	28

## LEVEL 1

<b>INTRODUCTION</b>	33
<b>DYNAMIC WARM-UP</b>	41
<b>PHASE A / WEEK 1-8</b>	45
DAY 1 .....	47
DAY 2 .....	49
DAY 3 .....	51
<b>PHASE B / WEEK 9-16</b>	53
DAY 1 .....	55
DAY 2 .....	57
DAY 3 .....	59
<b>STRETCHING</b>	61

## LEVEL 2

<b>INTRODUCTION</b>	67
<b>DYNAMIC WARM-UP</b>	75
<b>PHASE A / WEEK 1-8</b>	79
DAY 1 .....	81
DAY 2 .....	83
DAY 3 .....	85
<b>PHASE B / WEEK 9-16</b>	87
DAY 1 .....	89
DAY 2 .....	91
DAY 3 .....	93
<b>STRETCHING</b>	95

## LEVEL 3

<b>INTRODUCTION</b>	101
<b>DYNAMIC WARM-UP</b>	111
<b>PHASE A / WEEK 1-8</b>	115
DAY 1 .....	117
DAY 2 .....	119
DAY 3 .....	121
<b>PHASE B / WEEK 9-16</b>	123
DAY 1 .....	125
DAY 2 .....	127
DAY 3 .....	129
<b>PHASE C / WEEK 17-24</b>	131
DAY 1 .....	133
DAY 2 .....	135
DAY 3 .....	137
<b>STRETCHING</b>	139

## LEVEL 4

<b>INTRODUCTION</b>	145
<b>DYNAMIC WARM-UP</b>	155
<b>PHASE A / WEEK 1-8</b>	159
DAY 1 .....	161
DAY 2 .....	163
DAY 3 .....	165
DAY 4 .....	167
<b>PHASE B / WEEK 9-16</b>	169
DAY 1 .....	171
DAY 2 .....	173
DAY 3 .....	175
DAY 4 .....	177
<b>PHASE C / WEEK 17-24</b>	179
DAY 1 .....	181
DAY 2 .....	183
DAY 3 .....	185
DAY 4 .....	187
<b>STRETCHING</b>	189

“Sports is my daily life, I motivate myself,  
I challenge myself to stay alert  
and in shape for work.”



# USER GUIDE



15 lb / 7 kg

30 lb / 14 kg

45 lb / 20 kg

60 lb / 27 kg

75 lb / 34 kg

# INTRODUCTION

The Functional Strength & Conditioning Program was developed by the Royal Canadian Mounted Police Division Fitness & Lifestyle Advisors (DFLAs). The goal of the program is to improve users' current level of fitness and to prepare them for the challenges of daily living, operational duties or performance. Everyday, whether at work, home or during leisure activities, each person encounters physical challenges, some of which are relatively effortless (such as sitting or getting up from a chair) while others are so significant that failure to be successful can result in serious injury.

However, depending on the health status of the individual, getting up from a chair or walking up a set of stairs can pose a significant challenge. In contrast, other people who are physically active require new challenges in their exercise program in order to progress or continue to improve their fitness. Therefore, the goal of this four-level functional strength and conditioning program is to prepare police officers and all Canadians for whatever is their significant physical challenge.

The Level 1 Program is designed to help condition individuals who have not been physically active and would like to improve their health. The Level 1 Program makes sure that the user is meeting Canada's minimum physical activity guidelines for adults by focusing on general health and conditioning for activities of daily living.

The Level 2 Program is designed for individuals who have been active and have been meeting Canada's minimum guidelines for physical activity for the past 4-6 months. It further prepares these individuals for the activities of daily living and focuses on functional strength and conditioning for police work. The program also prepares members to take on the 4-minute PARE (see Appendix 6).

The Level 3 Program is intended to develop superior strength and conditioning for the activities of daily living. Additionally, Level 3 is structured to prepare members for specialized police work, such as that of Dog Handler and Underwater Recovery.

Lastly, the Level 4 Program is for the intermediate or advanced exerciser who is currently training and has extensive experience in strength and conditioning. This level focuses on developing athleticism and elite functional strength and conditioning for highly specialized police work, such as that of the Emergency Response Team.

Prior to embarking on one of these programs, it is important to become familiar with the program design, entry and exit criteria, safety, terminology and techniques.

If you need advice to determine if you possess the minimum level of fitness to undertake this program, please contact your DFLA or a fitness expert.

# QUESTIONS AND ANSWERS

## **Q1/ WHAT IS UNIQUE ABOUT THE RCMP FUNCTIONAL STRENGTH & CONDITIONING PROGRAM (FSCP)?**

Most traditional programs focus on training muscles using isolation type exercises. Although this method is commonly used among bodybuilders, it does not always transfer well to performance or movement. In some cases, this type of training may increase risk of injury. The RCMP FSCP was designed to be time efficient, effective and prepare you for the activities of daily living, work and performance.

## **Q2/ WHY ARE THERE FOUR LEVELS?**

The program was designed to accommodate the various needs and abilities of potential users. It is structured to include as many users as possible, depending on their current ability. The four levels can be done separately, or they can be linked sequentially as the user improves.

## **Q3/ AT WHICH LEVEL DO I START?**

That depends on your present level of physical activity, abilities and fitness. Each level has an entry requirement to help you determine which level you should start. If you need assistance with determining which one you should start, please consult your Division Fitness & Lifestyle Advisor or a fitness expert.

## **Q4/ HOW LONG IS THE PROGRAM IN EACH LEVEL?**

The program length varies and has been structured for 16-24 weeks, depending on the level.

## **Q5/ WHEN DO I PROGRESS TO THE NEXT LEVEL?**

Each program level has exit criteria. Once you have met the criteria for that level, you may progress to the next one.

## **Q6/ DO I HAVE TO MOVE UP TO THE NEXT LEVEL AFTER I HAVE COMPLETED ONE?**

No. However, if you are looking to make further improvements in your fitness, you will need to increase the challenge of your program. The next level can provide that challenge.

## **Q7/ IF I MEET THE EXIT CRITERIA BEFORE THE END OF THE PROGRAM, CAN I MOVE UP TO THE NEXT LEVEL?**

We recommend that you finish one level before attempting the next level. Each level is structured to progressively challenge your physical abilities and fitness. You should continue to follow every step of the program level, even if you can meet the exit criteria earlier.

## **Q8/ I CAN MEET SOME OF THE EXIT CRITERIA BUT NOT ALL OF THEM, CAN I MOVE ON TO THE NEXT LEVEL?**

No. If you cannot meet all of the criteria outlined in the exit criteria for your specific level, then you must not move up to the next level. In our opinion, you are not functional at that level and must work on those weaknesses.

## **Q9/ I HAVE SUCCESSFULLY COMPLETED ALL FOUR LEVELS, NOW WHAT?**

Congratulations! Since the Level 4 program is very challenging, we recommend that you take a 3-4 week break and cross train to give your body a chance to recover and regenerate. You may then start the Level 4 Program over again (providing you can meet the entry/exit criteria) or start at Level 3.

## **Q10/ HOW TO DO I RETURN TO EXERCISING IF I HAVE BEEN OFF DUTY SICK (ODS) OR ON VACATION?**

To determine where to start back into your exercise program, re-evaluate your physical ability using the entry and exit criteria in the User Guide.

## **Q11/ WHAT IF I DO NOT HAVE A HIGH/LOW PULLEY?**

If you do not have access to a high/low pulley you can use an exercise band/elastic. The band can be anchored to either a high/low position, as required.

## **Q12/ WHAT IF I DO NOT HAVE A LADDER?**

Level 3 and 4 use ladders in the workouts and if you do not have access to one you can make one. To do this you can mark a ladder on the floor using masking tape, with the following dimensions: 15 ft by 1.5 ft by 1.5 ft.

## **Q13/ WILL THIS PROGRAM ASSIST IN WEIGHT LOSS?**

This program not only addresses your aerobic capacity, but also your muscular strength and endurance, agility, coordination, power output and anaerobic capacity. As a result, the program will contribute more to fat loss than would an aerobic only program.

*If you have any other questions  
please contact your Division Fitness &  
Lifestyle Advisor or a fitness expert.*

# HOW TO SELECT A PROGRAM LEVEL

The Functional Strength & Conditioning Program contains four different training modules (levels). Each level has entry criteria and exit criteria. By answering the questions that follow, you can determine which level is appropriate to safely start, or you may consult with your Division Fitness & Lifestyle Advisor to help you determine which level is best for you to begin.

TO DETERMINE THE LEVEL AT WHICH YOU SHOULD START YOUR PROGRAM, PLEASE ANSWER THE FOLLOWING QUESTIONS UNTIL YOU CAN NO LONGER MEET THE CRITERIA FOR THE QUESTION. THIS STOPPING POINT IS/ REPRESENTS YOUR STARTING LEVEL. ✓

**1/ Are you in good health?**

- Yes – go to question 2     No – contact your DFLA or a fitness expert

**2/ Do you have any current injury or duty restrictions?**

- Yes – contact your DFLA     No – go to question 3 or a fitness expert

**3/ Did you answer “yes” to any questions on the PAR-Q+ (see Appendix 2)?**

- Yes – contact your DFLA     No – go to question 4 or a fitness expert

**4/ Have you been meeting the minimum guidelines for physical activity (150 minutes per week) for at least 4-6 months?**

- Yes – Go to question 5     No – Start at Level 1

**5/ Can you sustain a continuous effort of moderate intensity (5–6/10 Rate of Perceived Exertion – RPE – see Appendix 1) cardiovascular exercise for 30 minutes?**

- Yes – go to question 6     No – Start at Level 1

**6/ Can you perform the required number of pushups for your age group as outlined in Table 1-1 (p.12)?**

- Yes – Go to question 7     No – Start at Level 1  
 Not sure – Start at Level 1

**7/ Have you mastered the squat and lunge unloaded (i.e. own body weight)?**

- Yes – Go to question 8     No – Start at Level 1  
 Not sure – Start at Level 1

**8/ Can you run continuously for 30 minutes at a moderately hard intensity (7-8/10 RPE)?**

- Yes – Go to question 9     No – Start at Level 2

**9/ Can you perform the required number of push-ups for your gender (Male: 38, Female: 23)?**

- Yes – Go to question 10     No – Start at Level 2

**10/ Can you perform a back squat with 60% of your body weight for 10 repetitions?**

- Yes – Go to question 11     No – Start at Level 2  
 Not sure – Start at Level 2

**11/ Can you complete the PARE (see Appendix 6) in less than 4 minutes?**

- Yes – Go to question 12     No – Start at Level 2  
 Not sure – Start at Level 2

**12/ Can you complete the Cooper run in 12 minutes or less?**

- Yes – Go to question 13     No – Start at Level 3

**13/ Can you perform the required number of push-ups for your gender (Male: 43, Female: 29)?**

- Yes – Go to question 14     No – Start at Level 3

**14/ Can you perform a back squat with 80% of your body weight for 10 repetitions?**

- Yes – Go to question 15     No – Start at Level 3  
 Not sure – Start at Level 3

**15/ Can you complete the required number of pull ups for your gender (Male: 8, Female: 2)?**

- Yes – Go to question 16     No – Start at Level 3  
 Not sure – Start at Level 3

**16/ Can you complete one of the following: PARE in <3:30 minutes or a Police Dog Service Physical Abilities Requirement Evaluation (PARE) in <9:00 minutes?**

- Yes – go to question 17     No – Start at Level 3  
 Not sure – Start at Level 3

**17/ Are you an advanced or experienced strength and conditioning exerciser?**

- Yes – go to question 18     No – Start at Level 3  
 Not sure – Start at Level 3

**18/ Have you mastered these essential strength and conditioning exercises: back squat, lunge, dead lift, push-up, bench press, pull up, horizontal pull (row) and bracing (plank and side plank)?**

- Yes – Start at Level 4     No – Start at Level 3  
 Not sure – Start at Level 3



# PROGRAM

The Level 1 Program is designed to help condition the person who has not been physically active or has not been regularly meeting Canada's minimum guidelines for physical activity (150 minutes per week). The goal of the Level 1 Program is to ensure that users meet Canada's minimum target of 150 minutes of physical activity per week. In other words, users who follow the Level 1 Program will meet the minimum amount of physical activity to benefit their health.

## LEVEL 1 PROGRAM ENTRY CRITERIA

Prior to starting the Level 1 Program, you should be certain that:

- > you are in good health;
- > you have no current injury or duty restrictions; and
- > you have not answered "yes" to any of the questions on the Physical Activity Readiness Questionnaire (PAR-Q+, see Appendix 2).

If you have answered yes to any of the questions on the PAR-Q+, please discuss your suitability to start the program with your Division Fitness & Lifestyle Advisor (DFLA) or a fitness expert.

## LEVEL 1 PROGRAM EXIT CRITERIA

Prior to exiting the Level 1 Program, you must be able to accomplish the following:

1. sustain a continuous effort of moderate intensity (5-6/10 on the Rate of Perceived Exertion (RPE) scale) cardiovascular exercise for 30 minutes;
2. complete the required number of push-ups in the Level 1 category for your age group as outlined in Table 1-1; and
3. perform a squat and lunge unloaded (*i.e.* own body weight) with good form.

Table 1-1 Push-up Exit Criteria for Level 1 and Entry for Level 2 (CPAFLA<sup>1</sup>)

AGE	20-29	30-39	40-49	50-59	60-69
LEVEL 1 M (FROM TOES)	29-35	22-29	17-24	13-20	>21
LEVEL 1 F (FROM KNEES)	21-29	20-26	15-23	15-23	12-16

M = Male   F = Female

*Once you have successfully met these parameters, you may progress onto the Level 2 Program or continue using this level.*

<sup>1</sup> CSEP, Canadian Physical Activity, *Fitness and Lifestyle Approach* (CPAFLA), 3<sup>rd</sup> Edition, December 2004.



2

## PROGRAM

The Level 2 Program has been designed for individuals who are active and have been meeting Canada's minimum guidelines for physical activity for the past 4-6 months. This program further prepares individuals for activities of daily living and it focuses on functional strength and conditioning for police work. This program also prepares police officers to achieve the 4-minute PARE standard.

### LEVEL 2 PROGRAM ENTRY CRITERIA

Prior to starting this program, you should be certain that:

- > you are in good health;
- > you have no current injury or duty restrictions;
- > you have not answered "yes" to any of the questions on the Physical Activity Readiness Questionnaire (PAR-Q+, see Appendix 2);
- > you have been meeting the minimum guidelines for physical activity (150 minutes per week) for at least 4-6 months; and
- > you are able to meet the push-up criteria of the Level 1 Exit Program (Table 1-1).

### LEVEL 2 PROGRAM EXIT CRITERIA

Prior to exiting the Level 2 Program, you must meet the benchmarks listed in Table 2-1:

1. run continuously for 30 minutes at a moderately hard intensity (7-8/10 on the Rate of Perceived Exertion (RPE) scale);
2. perform the required number of push-ups for your age group at Level 2 (see Table 2-1);
3. perform a back squat with 60% of your body weight for 10 repetitions;
4. achieve the PARE 4-minute standard.

Table 2-1 Exit Criteria Level 2

	MALE	FEMALE
PUSH-UP (FROM TOES)	>38	>23
PARE	<4 min	<4 min
BACK SQUAT	60% of BW <sup>^</sup> (10 reps.)	60% of BW <sup>^</sup> (10 reps.)
CARDIO- VASCULAR (30 MIN)	7-8/10 RPE*	7-8/10 RPE*

BW<sup>^</sup> = Body Weight

RPE\* = Rate of Perceived Exertion (See Appendix 1)

REPS. = Repetitions

*Once you have successfully met these parameters, you may progress onto the Level 3 Program or continue using this level.*



# level **3**

## **PROGRAM**

The Level 3 Program is an advanced program which will help develop superior strength and conditioning for activities of daily living, as well as further increase the level of functional ability for police work. It is structured to prepare officers for specialized police work, such as that of the Police Dog Service and Underwater Recovery Team.

### **LEVEL3 PROGRAM ENTRY CRITERIA**

Prior to starting this program, you should be certain that:

- › you are in good health;
- › you have no current injury or duty restrictions;
- › you have not answered “yes” to any of the questions on the Physical Activity Readiness Questionnaire (PAR-Q+, see Appendix 2);
- › you have been meeting the minimum training guidelines for at least 5-6 months;  
(i.e. following a structured strength and conditioning program); and
- › you are able to meet the exit criteria of the Level 2 Program (see Table 2-1).

### **LEVEL 3 PROGRAM EXIT CRITERIA**

Prior to exiting the Level 3 Program, you must meet the benchmarks listed in Table 3-1.

Table 3-1 Exit Criteria for Level 3

	<b>MALE</b>	<b>FEMALE</b>
<b>PUSH-UPS (FROM TOES)</b>	<b>&gt;43</b>	<b>&gt;29</b>
<b>PULL UPS</b>	<b>8</b>	<b>2</b>
<b>BACK SQUAT</b>	<b>80% BW<sup>^</sup> (10 reps.)</b>	<b>80% BW<sup>^</sup> (10 reps.)</b>
<b>COOPER</b>	<b>12:00</b>	<b>12:00</b>
<b>PARE</b>	<b>&lt;3:30</b>	<b>&lt;3:30</b>
<b>PDS PARE</b>	<b>&lt;9:00</b>	<b>&lt;9:00</b>

BW<sup>^</sup> = Body Weight

*Once you have successfully met these parameters, you may progress to the Level 4 Program or take a 3-4 week break and cross train to give your body a chance to recover and regenerate. If you choose to cross train, please be certain that you are still able to meet the Level 3 exit criteria prior to starting the Level 4 program.*



## PROGRAM

The Level 4 program is for the intermediate or advanced exerciser who is currently training and has extensive experience in strength and conditioning. This individual has mastered all the essential strength exercises. Thus, this level focuses on developing power, athleticism and superior functional strength and conditioning for highly specialized police work, such as that of the Emergency Response Team. The Level 4 program is also suitable for the highly motivated fitness enthusiast.

### LEVEL 4 PROGRAM ENTRY CRITERIA

Prior to starting this program, you should be certain that:

- > you are in good health;
- > you have no current injury or duty restrictions;
- > you have not answered "yes" to any questions on the Physical Activity Readiness Questionnaire (PAR-Q+, see Appendix 2);
- > you are an advanced or experienced exerciser;
- > you have mastered these essential functional strength and conditioning exercises:
  - a. back squat
  - b. lunge
  - c. dead lift
  - d. push-up
  - e. bench press
  - f. pull up
  - g. vertical pull (row)
  - h. bracing (plank and side plank)
- > you are able to meet the exit criteria as listed in the Level 3 Program (see Table 3-1).

### LEVEL 4 PROGRAM EXIT CRITERIA

There are no exit criteria for the Level 4 Program. However, our goal is that you meet the benchmarks listed in Table 4-1.

Table 4-1 Fitness and Physical Abilities Bench Marks for Level 4

	MALE	FEMALE
PUSH-UPS (FROM TOES)	>50	>35
PULL UPS	>15	>5
BACK SQUAT	100% BW <sup>^</sup> (10 reps.)	100% BW <sup>^</sup> (10 reps.)
COOPER	<9:00	<10:30
PARE	<3:00	<3:15
ERT PARE	<11:00	<11:00

*Once you have completed the Level 4 program, take a 3-4 week break and cross train to give your body a chance to recover and regenerate. You may then resume your training, either at Level 3 or Level 4, depending on your ability to meet the entry criteria for that level.*

BW<sup>^</sup> = Body Weight

# EXERCISE SAFETY PREVENTING INJURIES

The best advice in preventing injuries and exercising safely is to use your best judgment (i.e. be responsible with the equipment and respect your physical limits). It is also important to be aware of the environment where you are exercising, as well as the way in which your body is responding to exercise.

*The following is a list of precautions that will enhance your training experience and make your environment safer:*

## EQUIPMENT

Before starting an exercise, check the equipment to make sure it is safe to use and that the area around you is free from clutter or tripping hazards.

## EXERCISE TECHNIQUE

It is important that you know how to safely perform each exercise. Improper execution of an exercise is often cited as one of the major causes of injury, because technique is compromised for increased resistance or number of reps. In addition, consider the following checklist of strategies for protecting against injuries<sup>2</sup>:

- > **test how heavy something is prior to lifting it;**
- > **use a solid, grounded lifting stance with firm footing;**
- > **keep knees flexed (bent) and hips slightly hinged;**
- > **brace the midsection by engaging your abs and use your legs as the prime movers, not the back;**
- > **keep the load close to the body;**
- > **stay upright with abdominal muscles engaged and do not slouch; and**
- > **when lifting from the ground, keep your arms close to the trunk and squat with your legs.**

## HYDRATE

As you exercise, your body loses water through sweat. Failure to replace this fluid can result in fatigue, decreased work capacity and increased susceptibility to infections and injury. At the very minimum, you should replace all fluid lost during a workout.

## INJURIES

Treat minor injuries such as abrasions, bruises, strains and cuts right away. To minimize damage and accelerate the healing process, use the RICE strategy when dealing with an injury:

- > **Rest the injured body part.**
- > **Ice the injured area for 10-20 minutes every 2-3 hours.**
- > **Compress the injured area with an elastic bandage or towel (if swelling occurs).**
- > **Elevate the injured area above the level of the heart.**

## OVERTRAINING

When your body does not have adequate time to recuperate from training, it can experience a plateau or an actual drop in performance. This lack of progression is usually a result of not following the recommended guidelines for proper recovery. Symptoms of overtraining include:

- > **prolonged muscle aches;**
- > **unexplained weight loss;**
- > **chronic fatigue;**
- > **loss of appetite;**
- > **inability to maintain performance;**
- > **decreased resistance to illness;**
- > **constipation or diarrhea; and**
- > **an increase in resting heart rate and training heart rate (8-10 bpm or greater).**

## PAR-Q+ (APPENDIX 2)

Please fill out the PAR-Q+. If you answered “yes” to any of the questions, please consult the Division Fitness & Lifestyle Advisor or a fitness expert.

## SHOES AND CLOTHING

Select shoes that fit properly and are designed for the intended activity. Wear comfortable clothing that does not restrict movement. Select clothing that is appropriate for the exercise environment. Clothes that wick moisture away are great for keeping you cool in hot environments. Wear layers when exercising outdoors in the cold and be mindful of frostbite, as well as the potential for hypothermia.

## WARM-UP AND COOL-DOWN (APPENDICES 3 AND 4)

Start each session with a warm-up and end with a cool-down. The warm-up should consist of a minimum of 5-10 minutes of light exercise (aerobic or dynamic) that serves to warm up the muscles. At the end of each training session, 5-10 minutes of active cool-down accompanied with some stretching is ideal.

Seek medical attention as soon as possible after an injury or if a minor injury persists.

<sup>2</sup> Frounfelter, G. 2009. Watch Your Bodymechanics, *NSCA Performance* *Performance Training Journal* 8(5): 8–9.

# BASIC FUNCTIONAL STRENGTH AND CONDITIONING TERMINOLOGY

## CIRCUIT TRAINING

Type of conditioning program designed to increase muscular endurance and anaerobic/aerobic capacity. It typically involves the use of weights, tubing, or body weight exercises that are performed in succession, for time (or a specific number of repetitions) with little or no rest periods in between exercises.

## COMPOUND SET

A training strategy that involves two different exercises for the same muscle group, with little or no rest between exercises (*e.g.* squat followed by leg extension).

## FREQUENCY

The number of training sessions in a specified time period.

## FUNCTIONAL TRAINING

The use of specific exercises and intensity, which involves training the body, for the activities performed in daily life, at work, or in sport.

## INTENSITY

The amount of stress an exercise places on a particular system. The intensity of an exercise can be characterized by perceived exertion. It can be manipulated by changing the number of reps, sets, effort and rest period.

## LOAD

The amount of weight being lifted.

## RATE OF PERCEIVED EXERTION (RPE)

The method for rating one's perception of the physical intensity of aerobic and resistance training.



## RATE OF PERCEIVED EXERTION (RPE)

RPE (0-10 scale)	% of Maximum Heart rate (MHR)	Level of Exertion	Talk Test
2	—	Very, very light	—
3	<35	Very light	Regular conversation
4	35-50	Fairly light	—
5-6	55-65	Moderate	Some pauses in conversation
7-8	70-85	Hard	Short phrases
9	>90	Very Hard	Short sentences
10	100	Maximal	Can't talk

### REPETITION(S) (REPS)

The number of times an exercise movement is to be repeated in a row. In strength training, for example, it is common to perform 8-12 repetitions of each exercise.

### REPETITION MAXIMUM (RM)

The maximum load that can be lifted for a specific number of repetitions. For example, a 1 RM load is the maximal load that can be lifted for 1 repetition.

### RESISTANCE

An opposing force. In strength and conditioning, it is the amount of weight to be lifted. Used synonymously with load.

### RESISTANCE TRAINING

the use of any method or type of exercise that requires a person to exert force against a load.

### REST

The duration of time given between sets, exercises, or workouts to allow for recovery.

### SET(S)

A group or number of repetitions performed consecutively without resting (e.g. a set may consist of 8 repetitions; a person may perform 3 sets of 8 repetitions).

### STRENGTH TRAINING

The use of resistance methods (e.g. free weights, individual's own weight, machines, tubing, or other devices) to increase one's muscular strength.

### SUPER SET

A training strategy in which opposing muscle groups (e.g. biceps/triceps) are trained consecutively using two exercises, without any rest between the two exercises. Alternatively, a super set can also involve two non-opposing muscle groups (e.g. quadriceps/abdominals).

### TEMPO

Tempo (Tpo) refers to the speed at which you are moving the load during the exercise. For example, a 2-1-1 Tpo would translate into a two-second movement (as in lowering the load), followed by a one-second pause, then a one-second movement (as in lifting of the load). A number 0, in a 1-0-1 Tpo would refer to no pause, while an "X" in a 1-1-X refers to an explosive movement.

# PAR-Q & YOU

## (A Questionnaire for People Aged 15 to 69)

Regular physical activity is fun and healthy, and increasingly more people are starting to become more active every day. Being more active is very safe for most people. However, some people should check with their doctor before they start becoming much more physically active.

If you are planning to become much more physically active than you are now, start by answering the seven questions in the box below. If you are between the ages of 15 and 69, the PAR-Q will tell you if you should check with your doctor before you start. If you are over 69 years of age, and you are not used to being very active, check with your doctor.

Common sense is your best guide when you answer these questions. Please read the questions carefully and answer each one honestly: check YES or NO.

**YES**
**NO**

1. Has your doctor ever said that you have a heart condition and that you should only do physical activity recommended by a doctor?
2. Do you feel pain in your chest when you do physical activity?
3. In the past month, have you had chest pain when you were not doing physical activity?
4. Do you lose your balance because of dizziness or do you ever lose consciousness?
5. Do you have a bone or joint problem (for example, back, knee or hip) that could be made worse by a change in your physical activity?
6. Is your doctor currently prescribing drugs (for example, water pills) for your blood pressure or heart condition?
7. Do you know of any other reason why you should not do physical activity?

If  
you  
answered

### YES to one or more questions

Talk with your doctor by phone or in person BEFORE you start becoming much more physically active or BEFORE you have a fitness appraisal. Tell your doctor about the PAR-Q and which questions you answered YES.

- You may be able to do any activity you want — as long as you start slowly and build up gradually. Or, you may need to restrict your activities to those which are safe for you. Talk with your doctor about the kinds of activities you wish to participate in and follow his/her advice.
- Find out which community programs are safe and helpful for you.

### NO to all questions

If you answered NO honestly to all PAR-Q questions, you can be reasonably sure that you can:

- start becoming much more physically active — begin slowly and build up gradually. This is the safest and easiest way to go.
- take part in a fitness appraisal — this is an excellent way to determine your basic fitness so that you can plan the best way for you to live actively. It is also highly recommended that you have your blood pressure evaluated. If your reading is over 144/94, talk with your doctor before you start becoming much more physically active.

#### DELAY BECOMING MUCH MORE ACTIVE:

- if you are not feeling well because of a temporary illness such as a cold or a fever — wait until you feel better; or
- if you are or may be pregnant — talk to your doctor before you start becoming more active.

**PLEASE NOTE:** If your health changes so that you then answer YES to any of the above questions, tell your fitness or health professional. Ask whether you should change your physical activity plan.

Informed Use of the PAR-Q: The Canadian Society for Exercise Physiology, Health Canada, and their agents assume no liability for persons who undertake physical activity, and if in doubt after completing this questionnaire, consult your doctor prior to physical activity.

**No changes permitted. You are encouraged to photocopy the PAR-Q but only if you use the entire form.**

NOTE: If the PAR-Q is being given to a person before he or she participates in a physical activity program or a fitness appraisal, this section may be used for legal or administrative purposes.

"I have read, understood and completed this questionnaire. Any questions I had were answered to my full satisfaction."

NAME \_\_\_\_\_

SIGNATURE \_\_\_\_\_

DATE \_\_\_\_\_

SIGNATURE OF PARENT \_\_\_\_\_  
or GUARDIAN (for participants under the age of majority)

WITNESS \_\_\_\_\_

**Note: This physical activity clearance is valid for a maximum of 12 months from the date it is completed and becomes invalid if your condition changes so that you would answer YES to any of the seven questions.**



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continued on other side...

# DYNAMIC WARM-UP

## EVERY WORKOUT MUST START WITH A WARM-UP.

The essential goal of the warm-up is to prepare your body for movement. Often the warm-up is comprised of hastily performed stretching which recent studies have indicated might do more harm than good.

In the context of the Functional Strength & Conditioning Program, the warm-up may consist of movements that will prepare the body and more specifically the muscle groups that will be used during that workout, or it might suggest a more traditional, progressive warm-up.

Completing a general warm-up or dynamic warm-up ensures your body will be ready to generate the necessary muscular actions required to successfully and safely complete your program. The program gives you both options and it is up to you to decide which one you want to use. **The take-home message is you must warm-up before you start to exercise!**

### DYNAMIC WARM-UP (5-10 MINUTES)

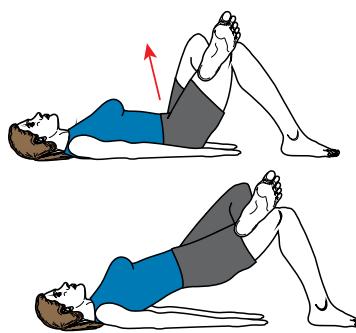
- › Perform 5-6 repetitions of each exercise.
- › Perform each exercise under control.
- › Intensity increases as you progress through the dynamic warm-up routine.

*See details next page...*

# DYNAMIC WARM-UP

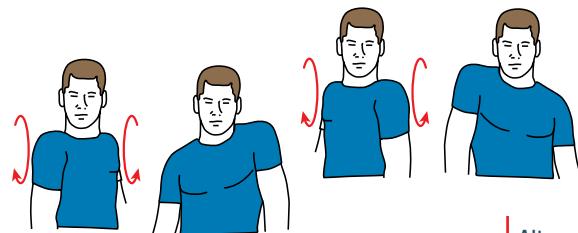
LEVELS 1 2

## EXERCISE

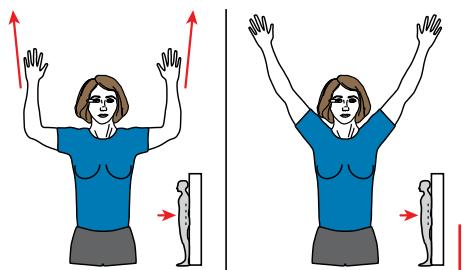


One Foot  
Hip Raise

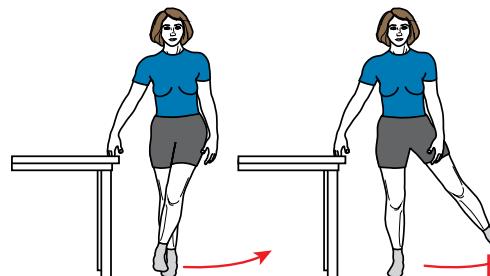
## EXERCISE



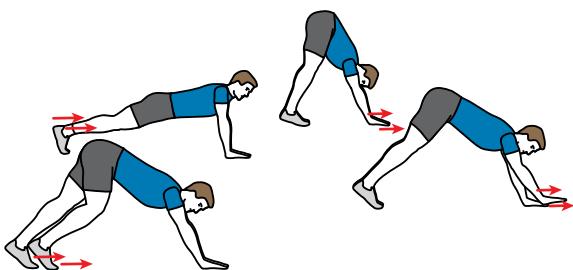
Alternated  
Shoulder  
Rotation



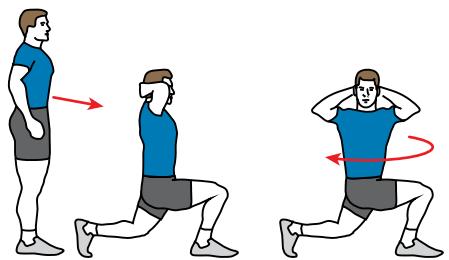
Flexibility /  
Shoulders  
Chest  
Stretching



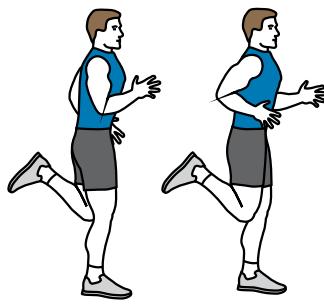
Flexibility /  
Hip Range  
of Motion



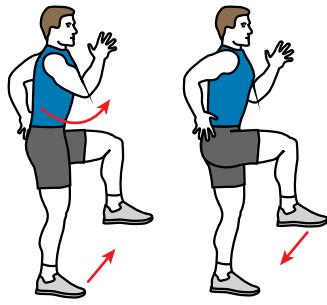
Caterpillar



Combo  
Forward  
Lunge And  
Trunk  
Rotation



Warm-up /  
Kick-back

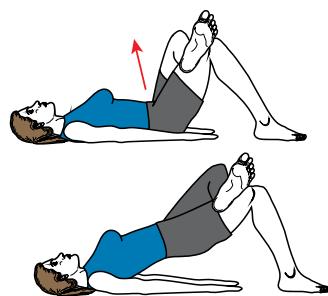


High Knees  
on Spot

# DYNAMIC WARM-UP

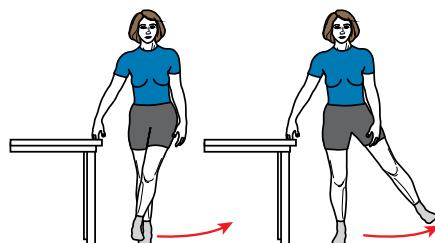
LEVELS 3 | 4

## EXERCISE

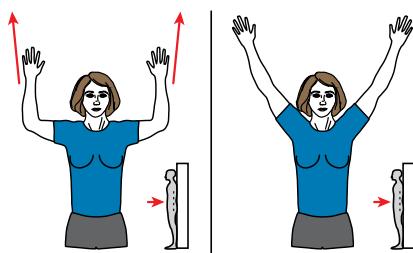


One Foot  
Hip Raise

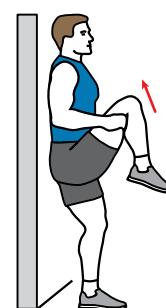
## EXERCISE



Flexibility /  
Hip Range  
of Motion



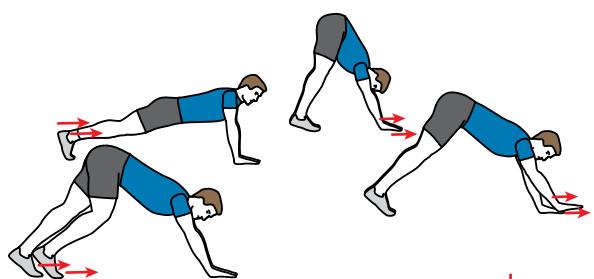
Flexibility /  
Shoulders  
Chest  
Stretching



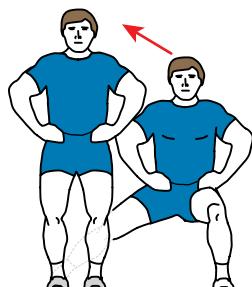
Flexibility /  
Buttocks  
Stretching



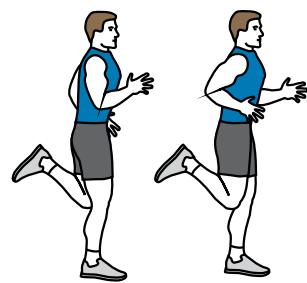
Strengthening  
Quad /  
Flexibility  
Hip Gluteal



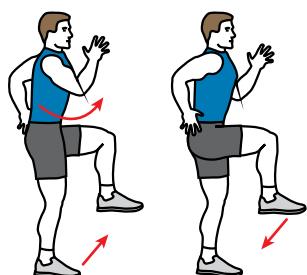
Caterpillar



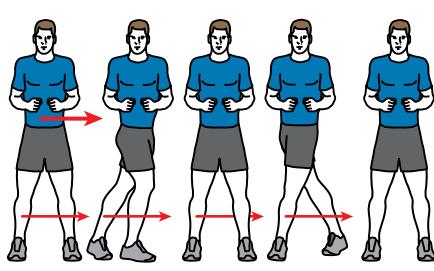
Side Lunges



Warm-up /  
Kick-back



High Knees  
On Spot



Carioca

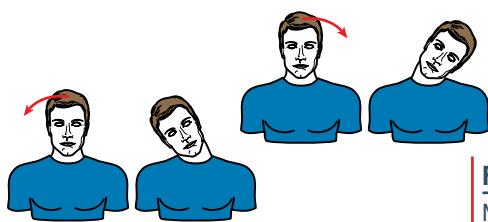
# **COOL-DOWN AND STRETCHING**

All exercise sessions should conclude with a cool-down phase. Cooling down is best accomplished by slowly reducing the intensity of the exercise during the last several minutes of the workout. For example, after running, slow down to a jog or a walk for 5-10 minutes. Follow the cool-down phase with some stretching exercises.

## **STRETCHING ROUTINE (10 MINUTES)**

- › stretch each body part 1-2 times;
- › hold each stretch 20-30 seconds;
- › stretch slowly and in control;
- › do not bounce or jerk;
- › go to the point of tension but not pain;
- › breathe normally;
- › avoid stretches that are uncomfortable or that hurt.

## EXERCISE

**FLEXIBILITY**

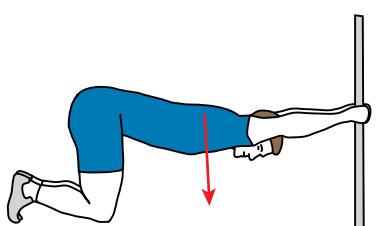
Neck Range of Motion

**FLEXIBILITY**

Shoulder Stretching

**FLEXIBILITY**

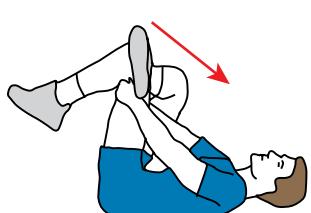
Quadriceps Stretching

**FLEXIBILITY**

Shoulders Chest Stretching

**FLEXIBILITY**

Thigh Stretching

**FLEXIBILITY**

Buttocks Stretching

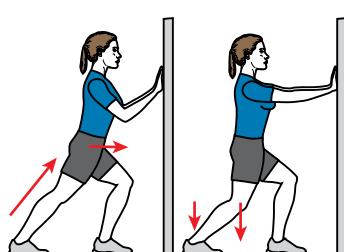
## EXERCISE

**FLEXIBILITY**

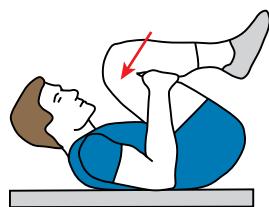
Shoulder Stretching

**FLEXIBILITY**

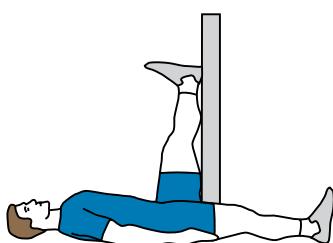
Thigh Stretching

**FLEXIBILITY**

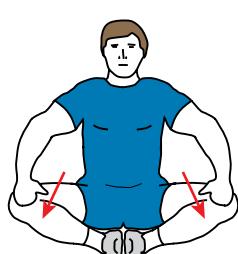
Calf Stretching Push on Wall

**FLEXIBILITY**

Back Stretching

**FLEXIBILITY**

Thigh Stretching

**FLEXIBILITY**

Thigh Stretching

# **FUNCTIONAL STRENGTH & CONDITIONING PROGRAM LOG SHEET**



# FUNCTIONAL STRENGTH & CONDITIONING PROGRAM LOG SHEET

ROYAL CANADIAN MOUNTED POLICE



**LEVEL NBR** **1** **2** **3** **4**

## Notes

## Notes

## Notes

## Notes

# **PHYSICAL ABILITIES REQUIREMENT EVALUATION (PARE) GUIDELINES**

The RCMP Physical Abilities Requirement Evaluation (PARE) is an occupational test used to assess a person's ability to perform the physical demands of police work, namely: running, jumping, climbing stairs, vaulting, lifting, carrying, pushing and pulling.

The types of duties police officers experience routinely involve gaining and maintaining physical control over suspects; intervening in family disputes; and participating in search and rescue operations. All of these duties involve the activities listed above. It is also likely that police officers will encounter some form of resistance on a regular basis and that they will deal with males seven times out of ten.

PARE was developed by exercise scientists and is based on extensive research, including a thorough job analysis. It is directly linked to Police Work and Police Training. The PARE is divided into three sections simulating a critical incident:



## STATION 1 OBSTACLE COURSE SECTION

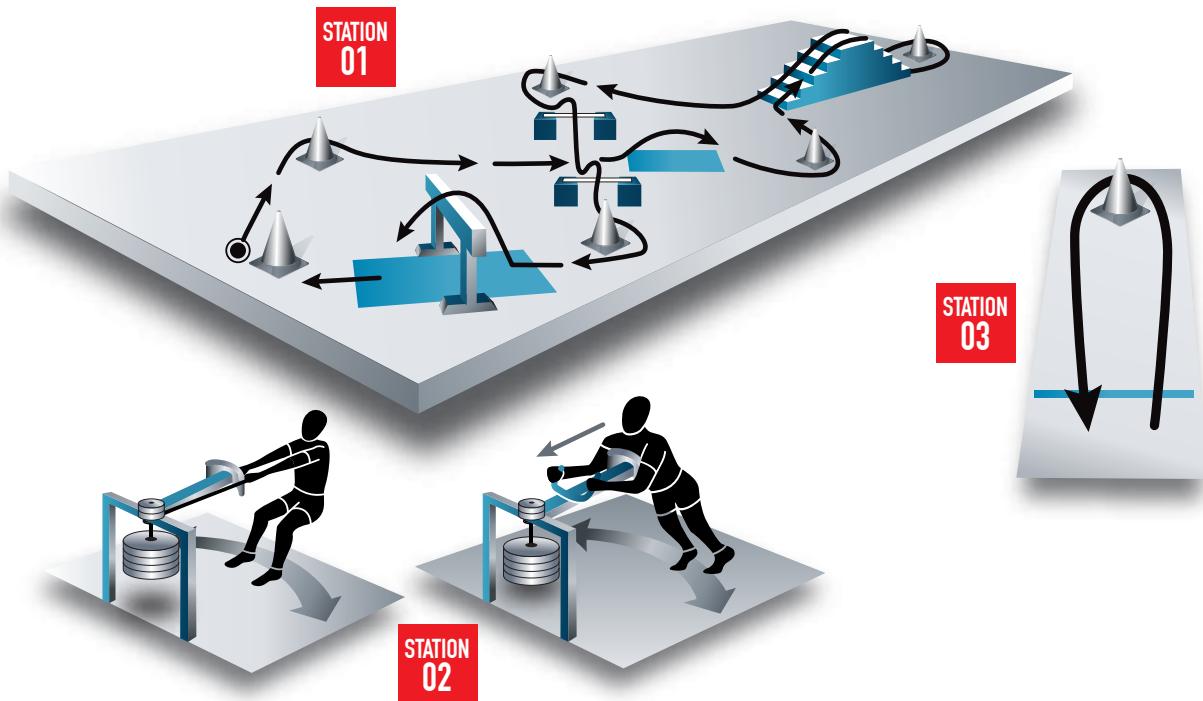
This simulates proceeding to the scene of a problem or occurrence. The total length of the course is near 350 m long (1150 feet) and involves running six laps which include: direction changes; jumping across a 1.5 m (5 feet) distance; ascending and descending stairs; jumping over 0.45 m (18 in) hurdles; vaulting a 0.9 m (3 feet) barrier, followed by performing a controlled fall and getting back up before starting the next lap. Each lap takes approximately 25 sec. At the end of the sixth lap the participant proceeds to the second section.

## STATION 2 PUSH/PULL SECTION

This simulates having to physically solve a problem or occurrence. It requires a 32 kg (70 lb) weight be pushed and pulled through six 180 degree arcs. Four controlled falls must be performed between the push and pull tasks; two to the front and two to the back. The push/pull section lasts approximately 70 sec.

## STATION 3 WEIGHT CARRY

This activity begins within 2 min of completing the Push/Pull Section. It simulates having to remove an object or a person from the scene. It requires a 36 kg (80 lb) bag be carried over a 15 metre (50 feet) distance. Participant will be given a maximum of three attempts to complete the Weight Carry Section.





**MOVING FORWARD**  
*together*