# CONTENTS

1. **INTRODUCTION** ....................................................................................................... 3  
   General instruction for your training program ................................................................. 3

2. **PHYSICAL ACTIVITY READINESS QUESTIONNAIRE** ........................................... 4

3. **TRAINING FOR STRENGTH** .................................................................................. 5

4. **TRAINING FOR CARDIOVASCULAR FITNESS** ..................................................... 6
   - Loaded carries .................................................................................................................. 6
   - Metabolic Circuits ........................................................................................................... 7
   - Strength Program – Block 1 .......................................................................................... 8
   - Strength Program – Block 2 .......................................................................................... 9
   - Strength Program – Block 3 .......................................................................................... 10
   - Strength Program – Block 4 .......................................................................................... 11
   - Cardiovascular Fitness Program Loaded Carries .......................................................... 12
   - Cardiovascular Fitness Program Body Weight Circuit Option ...................................... 13
   - Cardiovascular Fitness Program Barbell Circuit Option ............................................... 14
   - Cardiovascular Fitness Program Dumbbell Circuit Option .......................................... 15
   - Cardiovascular Fitness Program Treadmill/Bike option ............................................... 16
1. INTRODUCTION
Fire and Rescue NSW (FRNSW) enhances community safety, quality of life and confidence by minimising the impact of hazards and emergency incidents on the people, environment and economy of New South Wales. We play a critical role in building safety both legislatively and as a community service. We develop and deliver a range of community safety initiatives and prevention programs including FireED (Fire Education for Primary Schools) and IFAP (Intervention + Fire Awareness Program) to reduce fire-setting by young people. We work with other government agencies to minimise the impact of bushfires, storms, floods, landslides, building collapses, motor vehicle accidents and other emergencies.

We are a world class fire and rescue service with a long tradition of excellence in the protection of life, property and the environment. FRNSW is made up of approximately 14,000 people State wide, comprising more than 7,000 retained (on-call) and permanent (full-time) firefighters and support staff, and around 7,000 community fire unit volunteers.

FRNSW staff and volunteers are committed to maintaining the proud history and tradition of FRNSW, when serving the community and protecting the environment.

GENERAL INSTRUCTION FOR YOUR TRAINING PROGRAM

Before you get started
It is recommended all candidates complete a Physical Activity Readiness Questionnaire (PAR-Q) prior to commencing their preparation program. This can be found in Part 2 of this guide.

Getting started
You should commence training well in advance of the proposed date. At least 12 months of structured training prior to your PAT is highly recommended.

Progress at your own pace
You should progressively increase your training load (e.g. how long you perform your sessions for, or the amount of weight you are lifting), making sure your body has adequate time for rest and recovery. Progression should be gradual and within the limits your body can tolerate. Progressing your load or exercise without mastering previous load or exercise can increase your risk of injury. Do not progress if you are not physically capable to do so.

Taper your training before the PAT
Tapering your program at least one week before the actual test date will ensure adequate time for your body to recover and allow you to perform at your best during the PAT.
2. PHYSICAL ACTIVITY READINESS QUESTIONNAIRE

### ADULT PRE-EXERCISE SCREENING TOOL

This screening tool does not provide advice on a particular matter, nor does it substitute for advice from an appropriately qualified medical professional. No warranty of safety should result from its use. The screening system in no way guarantees against injury or death. No responsibility or liability whatsoever can be accepted by Exercise and Sports Science Australia, Fitness Australia or Sports Medicine Australia for any loss, damage or injury that may arise from any person acting on any statement or information contained in this tool.

Name: ___________________________

Date of Birth: __________________ Male □ Female □ Date: __________

### STAGE 1 (COMPULSORY)

AIM: to identify those individuals with a known disease, or signs or symptoms of disease, who may be at a higher risk of an adverse event during physical activity/exercise. This stage is self administered and self evaluated.

**Please circle response**

1. Has your doctor ever told you that you have a heart condition or have you ever suffered a stroke?  
   - Yes □ No □

2. Do you ever experience unexplained pains in your chest at rest or during physical activity/exercise?  
   - Yes □ No □

3. Do you ever feel faint or have spells of dizziness during physical activity/exercise that causes you to lose balance?  
   - Yes □ No □

4. Have you had an asthma attack requiring immediate medical attention at any time over the last 12 months?  
   - Yes □ No □

5. If you have diabetes (type I or type II) have you had trouble controlling your blood glucose in the last 3 months?  
   - Yes □ No □

6. Do you have any diagnosed muscle, bone or joint problems that you have been told could be made worse by participating in physical activity/exercise?  
   - Yes □ No □

7. Do you have any other medical condition(s) that may make it dangerous for you to participate in physical activity/exercise?  
   - Yes □ No □

**IF YOU ANSWERED ‘YES’ to any of the 7 questions, please seek guidance from your GP or appropriate allied health professional prior to undertaking physical activity/exercise.**

**IF YOU ANSWERED ‘NO’ to all of the 7 questions, and you have no other concerns about your health, you may proceed to undertake light-moderate intensity physical activity/exercise.**

I believe that to the best of my knowledge, all of the information I have supplied within this tool is correct.

Signature ___________________________ Date __________
3. TRAINING FOR STRENGTH

A high degree of strength and endurance is crucial for firefighters to enable the safe and effective execution of operational duties. Increasing your upper and lower body strength is essential for increasing your potential to pass the PAT.

It is highly recommended for individuals who are inexperienced in resistance training to engage appropriately qualified trainer / Exercise Scientist / Strength & Conditioning coach to assist in building your strength and endurance to a level capable of successfully completing this program.

The strength program below consists of 4 training blocks, where exercises, sets, repetitions and loads vary for each block.

**Exercise selection:** Each training block will include 1 exercise from the following exercise categories:
- Squat
- Hinge
- Single leg
- Upper body vertical and horizontal push
- Upper body pull

**Note:** It is imperative that correct technique is mastered with an exercise prior to adding load. If you are not proficient at a given exercise, continue with this exercise for the next block and adjust the sets, reps and loads to match that block. Since these sessions are strength-focused, you should do the prescribed number of sets for one exercise category before moving on to the next.

<table>
<thead>
<tr>
<th>Category</th>
<th>Block 1 (wk 1-4)</th>
<th>Block 2 (wk5-8)</th>
<th>Block 3 (wk9-12)</th>
<th>Block 4 (wk13-14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Squat</td>
<td>Goblet squat to bench</td>
<td>Goblet squat</td>
<td>Barbell back squat to bench</td>
<td>Barbell back squat</td>
</tr>
<tr>
<td>Hip hinge</td>
<td>Dowel Hip hinge</td>
<td>Barbell Romanian</td>
<td>Partial range</td>
<td>Deadlift (from ground)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Deadlift (Bar to knee)</td>
<td>Deadlift (pull</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>from mid shin)</td>
<td></td>
</tr>
<tr>
<td>Single leg</td>
<td>Dumbbell Split squat</td>
<td>Dumbbell Reverse lunge</td>
<td>Dumbbell Walking lunge</td>
<td>Barbell Rear foot</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>elevated split squat</td>
</tr>
<tr>
<td>Upper body vertical push</td>
<td>Standing single arm</td>
<td>Thruster (squat</td>
<td>Standing push press</td>
<td>Standing Military</td>
</tr>
<tr>
<td></td>
<td>Dumbbell Military press</td>
<td>to press-Barbell or</td>
<td>press (Barbell or</td>
<td>press (Barbell or</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dumbbell)</td>
<td>Dumbbell)</td>
<td>Dumbbell)</td>
</tr>
<tr>
<td>Upper body horizontal push</td>
<td>Incline Military push up</td>
<td>Military Push up</td>
<td>Military push up</td>
<td>Military Decline</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(pause hold- 2 sec at</td>
<td>(pause hold- 2 sec at</td>
<td>push up</td>
</tr>
<tr>
<td></td>
<td></td>
<td>bottom)</td>
<td>bottom)</td>
<td></td>
</tr>
<tr>
<td>Upper body pull</td>
<td>Low pulley row</td>
<td>Inverted row</td>
<td>1 arm bench row</td>
<td>Bent over row</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(Barbell or Dumbbell)</td>
</tr>
</tbody>
</table>

**Sets, reps and load selection**

Session 1 of each block involves determining your loads for the block. Pick a weight you think you can achieve for the prescribed repetitions (see table on the following page). Do as many
reps as you can with this weight (ensuring correct technique is maintained). If the reps achieved is 2 or more than the recommended, choose a heavier load.

Each week, look to increase lower body exercise loads by 2.5-5kg and upper body exercise loads by 1.25kg-2.5 kg (at least for 1 set in the session and only if correct technique can be maintained). Ensure correct technique can still be maintained with the increased loads.

<table>
<thead>
<tr>
<th>BLOCK</th>
<th>WEEKS</th>
<th>No. WARM UP SETS</th>
<th>SETS</th>
<th>REPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1-4</td>
<td>1</td>
<td>3</td>
<td>10-12</td>
</tr>
<tr>
<td>2</td>
<td>5-8</td>
<td>2</td>
<td>4</td>
<td>6-8</td>
</tr>
<tr>
<td>3</td>
<td>9-12</td>
<td>3</td>
<td>5</td>
<td>3-5</td>
</tr>
<tr>
<td>4</td>
<td>13-14</td>
<td>3</td>
<td>2</td>
<td>1-3</td>
</tr>
</tbody>
</table>

Look to progressively increase the weight and reduce the reps for each week within a given block. For example, block 3 for upper body vertical push (standing push press with barbell) may look like this:

<table>
<thead>
<tr>
<th>WEEK</th>
<th>SETS</th>
<th>REPS</th>
<th>Relative load</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5</td>
<td>5</td>
<td>28kg</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>4</td>
<td>30kg</td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td>3</td>
<td>31.25kg</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>3</td>
<td>32kg</td>
</tr>
</tbody>
</table>

Tip: Aim a >40kg Military press! Reason, 30kg load on resistance reel + 20% increase in physical demand from wearing PPE + PAT day nerves.

Tip: You should not be completing week 4 of block 4 (or any heavy resistance training) in the 7 days prior to undertaking the PAT.

Tip: As these sessions are “whole body” in nature and the below Cardiovascular fitness sessions contain a “strength element”, it is recommended that a maximum of 3 sessions be completed each week to allow sufficient recovery to obtain a positive adaptation.

4. TRAINING FOR CARDIOVASCULAR FITNESS

Ability to tolerate cardiovascular stress under load is extremely important for the safety and effectiveness of firefighters undertaking operational duties. The suggested programs below will assist in conditioning you for the stressors of the PAT.

When participating in these programs, participants should consider (where appropriate) exposing themselves to increased heat and metabolic costs through wearing heavy clothing (i.e. Tracksuit and/or jackets, beanie, gloves), weighted backpacks/vests (20kg) and 1kg ankle weights.

LOADED CARRIES

Option 1: Farmers carry (two sided dumbbell carry)
Option 2: Suitcase carry (single sided dumbbell carry)

• Distance: 250m
• Sets: 1-3
• Load: selected by what weight can be carried for 30m continuously (goal: 30kg single sided carry)
• Work:Rest = 2:1  e.g. Complete 250m carry in 2mins = 1min rest

**METABOLIC CIRCUITS**
Metabolic circuits are a series of exercises performed consecutively for prescribed repetitions/time without rest.

**Body weight circuit**
Sets: 2-4  
Reps: 15 reps of each non-stop  
Rest between sets: 90secs  
Exercises: Spiderman/ Push Ups/Mountain Climbers/Alternate Lunges/Prisoner Jump Squats

**Barbell circuit**
Sets: 2-4,  
Reps: 10 reps of each non-stop  
Rest between sets: 90secs  
Exercises: Back squat / alternate Lunge/ Military press/ Romanian deadlift / Bent over Row

**Dumbbell circuit**
Sets: 2-4  
Reps: 10 reps of each non-stop  
Rest between sets: 90secs  
Exercises: Renegade row/ push up/ squat (dumbbells shoulder height)/ push press/ alternate lunge

**Treadmill/bike option**
Work:Rest 3:1  
Work: 60 sec @ 10-14% incline (at a walking/ slow jogging pace) or 60sec hill climb on bike (standing off seat, increased resistance) Rest: 20 sec recovery (stand on sides of treadmill/sit on bike)  
Repeats per set: 6-8 repeats  
Rest between sets: 90 sec Sets: 2-3

Tip: It is recommended that a maximum number of 2 cardiovascular fitness sessions be completed each week to complement your strength training. You have 7 options to choose from i.e. 2 x loaded carry options, 3 x metabolic circuit options, 1 x treadmill and 1 x bike option

**Example weekly training schedule**

<table>
<thead>
<tr>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
<th>Sunday</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strength session</td>
<td>Cardiovascular session</td>
<td>REST</td>
<td>Strength session</td>
<td>REST</td>
<td>Cardiovascular session</td>
<td>REST</td>
</tr>
</tbody>
</table>
## STRENGTH PROGRAM - BLOCK 1

**Weeks:** 1-4  
**No. warm up sets:** 1  
**Sets:** 3  
**Reps:** 10-12

**Note:** It is imperative that correct technique is mastered with an exercise prior to adding load. If you are not proficient at a given exercise, continue with this exercise for the next block and adjust the sets, reps and loads to match that block. Since these sessions are strength-focused, you should do the prescribed number of sets for one exercise category before moving on to the next.

<table>
<thead>
<tr>
<th>Category</th>
<th>Squat</th>
<th>Hip hinge</th>
<th>Single leg</th>
<th>Upper body vertical push</th>
<th>Upper body horizontal push</th>
<th>Upper body pull</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Block 1</strong> (wk 1-4)</td>
<td>Goblet squat to bench</td>
<td>Dowel Hip hinge</td>
<td>Dumbbell Split squat</td>
<td>Standing single arm Dumbbell Military press</td>
<td>Incline Military press up</td>
<td>Low pulley row</td>
</tr>
<tr>
<td>Load selection</td>
<td>Session 1:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Technique</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**STRENGTH PROGRAM – BLOCK 2**

- **Weeks:** 5-8
- **No. warm up sets:** 2
- **Sets:** 4
- **Reps:** 6-8

**Note:** It is imperative that correct technique is mastered with an exercise prior to adding load. If you are not proficient at a given exercise, continue with this exercise for the next block and adjust the sets, reps and loads to match that block. Since these sessions are strength-focused, you should do the prescribed number of sets for one exercise category before moving on to the next.

<table>
<thead>
<tr>
<th>Category</th>
<th>Squat</th>
<th>Hip hinge</th>
<th>Single leg</th>
<th>Upper body vertical push</th>
<th>Upper body horizontal push</th>
<th>Upper body pull</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block 2 (wk 5-8)</td>
<td>Goblet squat</td>
<td>Barbell Romanian Deadlift (Bar to knee)</td>
<td>Dumbbell Reverse lunge</td>
<td>Thruster (squat to press – Barbell or dumbbell)</td>
<td>Military pushup</td>
<td>Inverted Row</td>
</tr>
<tr>
<td>Load selection</td>
<td>Session 1:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Technique**
STRENGTH PROGRAM - BLOCK 3

Weeks: 9-12
No. warm up sets: 3
Sets: 5
Reps: 3-5

**Note:** It is imperative that correct technique is mastered with an exercise prior to adding load. If you are not proficient at a given exercise, continue with this exercise for the next block and adjust the sets, reps and loads to match that block. Since these sessions are strength-focused, you should do the prescribed number of sets for one exercise category before moving on to the next.

<table>
<thead>
<tr>
<th>Category</th>
<th>Squat</th>
<th>Hip hinge</th>
<th>Single leg</th>
<th>Upper body vertical push</th>
<th>Upper body horizontal push</th>
<th>Upper body pull</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block 3 (wk 9-12)</td>
<td>Barbell back squat to bench</td>
<td>Partial range deadlift (pull from mid shin)</td>
<td>Dumbbell walking lunge</td>
<td>Standing push press (barbell or dumbbell)</td>
<td>Military pushup (pause hold - 2 seconds at bottom)</td>
<td>1 arm bench row</td>
</tr>
<tr>
<td>Load selection</td>
<td>Session 1:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technique</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**STRENGTH PROGRAM – BLOCK 4**

**Weeks:** 13-14  
**No. warm up sets:** 3  
**Sets:** 2  
**Reps:** 1-3

**Note:** It is imperative that correct technique is mastered with an exercise prior to adding load. If you are not proficient at a given exercise, continue with this exercise for the next block and adjust the sets, reps and loads to match that block. Since these sessions are strength-focused, you should do the prescribed number of sets for one exercise category before moving on to the next.

<table>
<thead>
<tr>
<th>Category</th>
<th>Squat</th>
<th>Hip hinge</th>
<th>Single leg</th>
<th>Upper body vertical push</th>
<th>Upper body horizontal push</th>
<th>Upper body pull</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Block 1</strong> (wk 13-14) Load selection Session 1:</td>
<td>Barbell back squat</td>
<td>Deadlift (from ground)</td>
<td>Barbell rear foot elevated split squat</td>
<td>Standing military press (barbell or dumbbell)</td>
<td>Military decline pushup</td>
<td>Bent over row (barbell or dumbbell)</td>
</tr>
</tbody>
</table>

**Technique**
### Cardiovascular Fitness Program

**Loaded Carries**

**Distance:** 250m  
**Sets:** 1-3  
**Load:** selected by what weight can be carried for 30m continuously (goal: 30kg single sided carry)  
**Work:Rest = 2:1 e.g. Complete 250m carry in 2mins = 1min rest**

**Options**

- **Suitcase carry**  
  (single sided dumbbell carry)

- **Farmers Carry**  
  (two sided dumbbell carry)

**Technique**
CARDIOVASCULAR FITNESS PROGRAM
METABOLIC CIRCUITS
BODY WEIGHT CIRCUIT OPTION

Sets: 2-4
Reps: 15 reps of each non-stop
Rest between sets: 90secs

Note: It is imperative that correct technique is mastered with an exercise prior to adding load. If you are not proficient at a given exercise, continue with this exercise for the next block and adjust the sets, reps and loads to match that block. Since these sessions are strength-focused, you should do the prescribed number of sets for one exercise category before moving on to the next.

<table>
<thead>
<tr>
<th>Exercise</th>
<th>Spiderman</th>
<th>Pushups</th>
<th>Mountain Climbers</th>
<th>Alternate Lunges</th>
<th>Prisoner Jump Squats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technique</td>
<td><img src="image1" alt="Spiderman" /></td>
<td><img src="image2" alt="Pushups" /></td>
<td><img src="image3" alt="Mountain Climbers" /></td>
<td><img src="image4" alt="Alternate Lunges" /></td>
<td><img src="image5" alt="Prisoner Jump Squats" /></td>
</tr>
</tbody>
</table>
CARDBOVASELAR FITNESS PROGRAM
METABOLIC CIRCUITS
BARBELL CIRCUIT OPTION

Sets: 2-4
Reps: 10 reps of each non-stop
Rest between sets: 90secs

Note: It is imperative that correct technique is mastered with an exercise prior to adding load. If you are not proficient at a given exercise, continue with this exercise for the next block and adjust the sets, reps and loads to match that block. Since these sessions are strength-focused, you should do the prescribed number of sets for one exercise category before moving on to the next.

<table>
<thead>
<tr>
<th>Exercise</th>
<th>Back squat</th>
<th>Alternate Lunge</th>
<th>Military Press</th>
<th>Romanian Deadlift</th>
<th>Bent over row</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technique</td>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
<td><img src="image3.png" alt="Image" /></td>
<td><img src="image4.png" alt="Image" /></td>
<td><img src="image5.png" alt="Image" /></td>
</tr>
</tbody>
</table>
CARDIOVASCULAR FITNESS PROGRAM
METABOLIC CIRCUITS
DUMBBELL CIRCUIT OPTION

Sets: 2-4
Reps: 10 reps of each non-stop
Rest between sets: 90secs

Note: It is imperative that correct technique is mastered with an exercise prior to adding load. If you are not proficient at a given exercise, continue with this exercise for the next block and adjust the sets, reps and loads to match that block. Since these sessions are strength-focused, you should do the prescribed number of sets for one exercise category before moving on to the next.

<table>
<thead>
<tr>
<th>Exercise</th>
<th>Renegade Row</th>
<th>Pushup</th>
<th>Squat (dumbbells shoulder height)</th>
<th>Push press</th>
<th>Alternate Lunge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technique</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

![Renegade Row Technique](image1)
![Pushup Technique](image2)
![Squat Technique](image3)
![Push Press Technique](image4)
![Alternate Lunge Technique](image5)
### CARDIOVASCULAR FITNESS PROGRAM

**TREADMILL/BIKE OPTION**

**Sets:** 2-3  
**Repeats per set:** 6-8  
**Rest between sets:** 90secs  
**Work:rest (during each repeat) = 3:1**

<table>
<thead>
<tr>
<th>Options</th>
<th>Treadmill</th>
<th>Bike</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Work</strong></td>
<td>Work: 60 sec @ 10-14% incline (at a walking/ slow jogging pace)</td>
<td>or 60sec hill climb on bike (standing off seat, increased resistance)</td>
</tr>
<tr>
<td><strong>Rest</strong></td>
<td>Rest: 20 sec recovery (stand on sides treadmill)</td>
<td>Rest: 20 sec recovery (sit on bike)</td>
</tr>
<tr>
<td><strong>Repeats per set and rest between sets</strong></td>
<td>Rotate through the above work and rest components for 6 to 8 repeats, then have 90 seconds rest before repeating 1 to 2 times</td>
<td></td>
</tr>
</tbody>
</table>