

Training suggestion that relate to the physical abilities test developed for structural fire fighting

- This document is NOT a detailed training program. These suggestions are meant to build on an existing level of fitness and to enhance the ability to perform physically demanding tasks relevant to firefighting.
- A well-rounded approach to the career of firefighting should include a long term plan to develop and maintain a level of physical activity suited to both performance and good health.

Structural firefighting is a physically demanding occupation and because of this a certain level of fitness is expected before becoming a firefighter. The University of Alberta Firefighter Physical Aptitude Test has been designed to challenge the cardiovascular and muscular endurance, strength and power at a level consistent with structural firefighting. This includes wearing personal protective clothing while demonstrating the minimal physical fitness to purposefully and safely walk, climb, lift, carry, push, pull, hold and drag. None of the components of the test can exactly duplicate the variety of challenges a firefighter might face, however, the work required to complete each test simulates the physical capability that a firefighter should have in order to work safely and effectively. These training suggestions will not just help to prepare you for the test but they will also help you to prepare for the critical physical demands required in training or on the job

Physical Preparation for the Test

- *Understand the Physical Aptitude Test* – read the [information package](#) and descriptions carefully so you know what you are preparing for
- *Self-Evaluation* – review your training history and honestly evaluate your personal strengths and weaknesses. Try to simulate all of the elements of the test use this a personal baseline for future comparison consider your performances relative to the minimally acceptable performance times
- *Set training objectives* – The suggestions that follow “assume” the need for equal preparation in all elements in order to succeed, however, based on your self-evaluation, you may wish to place more emphasis on some elements (e.g., hose drag) and less on another (e.g., treadmill).
- *Design a simple program* – choose the fewest number of exercises and the simplest progressions possible. The quality of your workouts depends on the correct application work and rest. High intensity (load+speed) efforts cannot be repeated without adequate intervals of rest.
- *Monitor your training* – keep track of your training sessions in a simple journal. Are you able to complete every workout? Are you planning adequate work and adequate recovery days? You will need to periodically modify your training if it is too hard or too easy.
- *Repeat the self-evaluation* – after 6 and 9 weeks of training, repeat the simulated tests to see how the training has improved your performance. Remember to give yourself at least one day of rest before attempting the test. After each self-evaluation, adjust your training plan accordingly.

Training Guidelines

- Use the information in this package as a guide. Remember that it is not an individualized program.
- Seek professional advice and assistance to help with the self-evaluation and individualizing these suggestions to meet your needs.
- If you want to build fitness in a particular component then you will probably need to complete three challenging workouts each week.
- If you are satisfied with your current performance level in a particular component, then you can probably maintain that level of fitness by completing one challenging workout each week.
- Good luck with your training and your test performance!

Training suggestion that relate to the physical abilities test developed for structural fire fighting

THE TREADMILL TEST evaluates your ability to complete a representative sample of endurance work while carrying a typical load; and second, to evaluate your maximal work capacity under load.

Mindset: Be prepared to work hard and sustain it.

The incline and the addition of about 23 kg is what will challenge you the most NOT the speed. Be prepared to climb, under load, knowing that the next minute will be harder than the one you just finished...

Frequency – you should work on your endurance fitness for the treadmill test 2 or 3 times per week

Suggested training adjustment		Sample
Running on flat ground	→→→ Walk at a brisk pace and a steep incline OR on climb stairs	<ul style="list-style-type: none"> • Work at a high intensity for 1-2 min (3.5-4.0 mph) (12-15% incline) • Rest for 1-2 minutes (3.0-3.5mph) (1-2% incline) • Complete 5-8 of these intervals (15-30 minutes) • Increase the grade on your next workout if you feel you can do more than 8 intervals • Make sure the backpack is comfortable and weighs ~20-25 kg (45-55 lbs) • Do not overdue the amount of extra clothing you wear. You should feel hot but it should not impair your ability to complete the hard work
Long continuous workouts	→→→ Shorter duration (2-4min) higher intensity (85%+) intervals	
Clothing = Shorts and T shirt	→→→ Clothing = backpack and coveralls	

THE JOB RELATED TESTS evaluate your ability to use tools and equipment to lift, carry, push, pull, drag and hammer. You must also walk and climb across distances (7-30m) similar to what is required on the job or in training. This work must be completed safely, however, it is generally accomplished with a sense of purpose and in some cases, urgency.










Mindset: Be prepared to move heavy objects for sustained amounts of time.

Many of the loads encountered during firefighting are heavy (25-85kg, 40-180lb) good lifting technique and carrying ability are essential (including handgrip endurance). Be prepared to complete hard work against a considerable amount of resistance (the heavier the better) while maintaining a purposeful pace. The best way to prepare for this type of work is to ensure you a range of heavy weights and then enough space to mimic each type of task.

Frequency – you should work on your job related strength, endurance and power 2 or 3 times per week

Suggested training adjustment		Sample
Weightlifting with sets x repetitions	→→→ Try moving heavy objects a set distance or completing as many repetitions as possible in a fixed amount of time	<ul style="list-style-type: none"> • Use heavy loads but try to maintain work for 20s intervals instead of 8-12 reps • Try seated rows, dumbbell presses, squat to press, and wall sits with curls for bouts of time • For example <ul style="list-style-type: none"> ○ 3 x (20s W 10s R) OR 60s continuous ○ 90s Recovery (walk around the gym) ○ Repeat 2-3times ○ W is work R is rest • Try shallow walking lunges and stair climbing short distances with extra loads like backpacks, dumbbells or both (20kg pack, and 35-50 lb dumbbells per arm) • Using rope to practice pulling heavy tires or weighted sleds or practice dragging them backwards 10-15m at a time • Try lifting, carrying and 20-50 kg 30m at a time and free holding 20kg for 35 to 40s
Focusing on individual muscles	→→→ Incorporate more multi-joint /whole body dumbbell, and barbell exercises. Use muscle groups and coordinated movements to move heavy loads	
Training in a tight space	→→→ Find places where you can practice, sled drags, rope pulls, and carries for distance	

Training suggestion that relate to the physical abilities test developed for structural fire fighting

<p>Seated rows</p>  <p>40-50 lb/arm = 80-100lb</p>	<p>Inclined dumbbell press</p>  <p>35-50 lb/arm</p>	<p>Squat to press</p>  <p>20-40lb /arm</p>																														
<p>Plank with instability challenge</p>  <p>5 small circles with the upper body in each direction</p>	<p>Walking lunges</p>  <p>40-50 lb/arm = 80-100lb</p>	<p>Stair climbing with backpack or dumbbells</p>  <p>20-25kg back pack</p>																														
<p>Rope Pulling</p>  <p>Repeated (15-20s) Heavy efforts Challenge your grip and upper body</p>	<p>Sled Pushing</p>  <p>Steady, Very Heavy 10m at a time NOT light and fast</p>	<p>Dragging, pulling, pushing old tires</p>  <p>Heavy repeated 15m efforts</p>																														
<p>You can use the Rating of Perceived Exertion (RPE) scale shown on the right to gauge your intensity</p> <p>Treadmill intervals should challenge you at the 17 to 19 difficulty where 20 is the hardest effort you have ever given</p> <p>Job related tasks should be hard (17-19)</p> <ul style="list-style-type: none"> ➤ firstly because they feel heavy ➤ secondly because of the edurance needed to complete 20-90 seconds of work 	<p>Borg Scale of Perceived Exertion (RPE)</p> <table border="0"> <tr><td>6</td><td></td></tr> <tr><td>7</td><td>Very, very light</td></tr> <tr><td>8</td><td></td></tr> <tr><td>9</td><td>Very light</td></tr> <tr><td>10</td><td></td></tr> <tr><td>11</td><td>Fairly light</td></tr> <tr><td>12</td><td></td></tr> <tr><td>13</td><td>Somewhat hard</td></tr> <tr><td>14</td><td></td></tr> <tr><td>15</td><td>Hard</td></tr> <tr><td>16</td><td></td></tr> <tr><td>17</td><td>Very hard</td></tr> <tr><td>18</td><td></td></tr> <tr><td>19</td><td>Very, very hard</td></tr> <tr><td>20</td><td></td></tr> </table>		6		7	Very, very light	8		9	Very light	10		11	Fairly light	12		13	Somewhat hard	14		15	Hard	16		17	Very hard	18		19	Very, very hard	20	
6																																
7	Very, very light																															
8																																
9	Very light																															
10																																
11	Fairly light																															
12																																
13	Somewhat hard																															
14																																
15	Hard																															
16																																
17	Very hard																															
18																																
19	Very, very hard																															
20																																