



fire etc.

the emergency training centre of Lakeland College

Recommended Medical Clearance for Live-Fire Training

Courses:

NFPA 1001 - Structural Firefighting (S700)

NFPA 1001 - Industrial Firefighting (S800)

NFPA 1081 - Industrial Firefighter Entry, Interior Structural, and Advanced Exterior Levels

Applicant: _____ (please print)

Purpose:

The purpose of this document is to ensure that the person named above (applicant) is medically fit to undertake live-fire training. A brief summary of the physical demands for the training courses is provided below. Further information may be obtained by contacting the **Associate Registrar, Lakeland College** at 1-800-661-6490.

Summary of Physical Demands:

These courses include both theoretical and practical study of structural/industrial firefighting. The practical component normally includes multiple days of simulated fire suppression exercises where students are exposed to the physical demands normally associated with firefighting work. During a typical practical day, students may experience 4-6 training scenarios. Each scenario involves between 15-60 minutes of exposure to severe environmental and physical stress. Some of the major stressors are outlined below:

1. Tolerating extreme fluctuations in temperature while performing duties. Students are required to perform physically demanding work in hot (up to 150°C or 400°F), humid (up to 100%) atmospheres while wearing personal protective equipment that significantly impairs thermoregulation.¹ (Core body temperatures can reach up to 40°C after 20 min of hard work).
2. Wearing firefighting clothing and equipment that weighs at least 22 kg (50 lb) while performing firefighting work.¹
3. Performing physically demanding work while wearing positive pressure self-contained breathing apparatus (SCBA) which presents a significant resistance to expiratory flow and may reduce peak exercise ventilation by approximately 15%.^{1,2}
4. Making rapid transitions from rest to near maximal exertion without warm-up periods.¹
5. Operating in environments of high noise, poor visibility, limited mobility; at heights; and, in enclosed or confined spaces.¹
6. Using hose, ladders, and manual or power tools that weigh up to 45 kg (100 lb).^{3,4}
7. High levels of energy expenditure that are estimated to average approximately 8-10 METS^{4,5} and may exceed 12 METS.¹ Completion of Stage 3 of the Bruce treadmill protocol (3.4 mph and 14% grade) or running at 6.0 mph on level ground is equivalent to about 10 METS.
8. High levels of cardiovascular stress as evidenced by average heart rates of 70% of the age-predicted maximum during training scenarios with brief, repeated periods of near maximal heart rate (90+%).⁶

References (available upon request from *fire etc., Lakeland College*):

¹National Fire Protection Agency. (2003) *Standard 1582, Medical Requirements for Fire Fighters and Information for Fire Department Physicians*. Quincy, MA: National Fire Protection Association.

²Eves ND, Jones RL, Petersen SR (2005) The influence of the self-contained breathing apparatus (SCBA) on ventilatory function and maximal exercise. *Canadian Journal of Applied Physiology* 30(5): 507-519.

³DOT Occupational Codes. (1993) Selected Characteristics of Occupations Defined in the Revised Dictionary of Occupational Titles, U.S. Dept. of Labor, U.S. Government Printing Office, Washington, D.C.

⁴Gledhill, N., and Jamnik, V. K. (1992). Characterization of the physical demands of firefighting. *Canadian Journal of Sport Science*. 17: 207-213.

⁵Sothmann, M., Saupe, K., Jansenof, D., Blaney, J., Fuhrman, S. D., Woulfe, T., Raven, P., Pawelczyk, J., Dotson, C., Landy, F., Smith, J. J., and Davis, P. (1990). Advancing age and the cardiorespiratory stress of fire suppression: determining a minimum standard for aerobic fitness. *Human Performance*. 3: 217-236.

⁶Dreger, RW, Petersen, SR, Dlin RA. *Heart rate responses to firefighter training*. Final report submitted to the Alberta Fire Training School, March 2002.

Medical Clearance

I have examined _____ and am satisfied that this individual is medically fit to participate in the fire training course described above.

Physician's name: _____

Address: _____

Telephone: _____

Physician's signature: _____

Date: _____

The costs associated with completion of this form are the responsibility of the applicant.

APPLICANT MEDICAL QUESTIONNAIRE

To the applicant: Please complete this questionnaire and take it with you to the medical examination by your physician.

Date: _____ / _____ / _____

Name: _____ AHC #: _____
FAMILY NAME GIVEN NAME(S)

Date of birth: _____ / _____ / _____ Age: _____ Gender: M _____ F _____

Address: _____ Phone: _____

City: _____ Postal Code: _____

Present health:

1. Good with no medical complaints.

2. Symptoms or medical complaints _____

3. Are you presently on any treatment for any medical condition? **YES NO**

If YES please explain _____

Activity related problems:

Have you experienced any of the following conditions related to work or exercise?

- | | | |
|------------------|-----------------------------|-------------------------|
| 1. back problems | 2. chest pain | 3. dizziness |
| 4. fainting | 5. muscle or joint problems | 6. irregular heart beat |
| 7. wheezing | 8. other | |

Please explain _____

Illnesses, operations, hospitalizations, or injuries:

Date	Problem	Treatment	Outcome
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Medications:

Please list any medications you are taking on a regular basis.

Allergies:

Drug allergies: _____

Other allergies: _____

Past medical history:

Have you had any of the following conditions? (please circle)

- | | |
|----------------------------------|--|
| 1. Heart disease | 9. Epilepsy |
| 2. High blood pressure | 10. Head injury, loss of consciousness |
| 3. Lung disease including asthma | 11. Fractures, joint or muscle problems |
| 4. Kidney disease | 12. Surgery |
| 5. Diabetes | 13. Back problems |
| 6. Bowel disease | 14. Missing organs (e.g., eye, kidney) |
| 7. Cancer | 15. Tendonitis, carpal tunnel, whitehand |
| 8. Emotional illness | 16. Worker's compensation injury/illness |

If you have had any of the above please explain. _____

Occupational exposure:

Have you or do you require use of protective equipment at any time to carry out your job duties (SCBA, respirator, noise protection)? Detail _____

Have you ever worked in an area with exposure to noxious or toxic chemicals, gases, ionizing radiation (x-ray, gamma ray, etc.), radiant energy (UV, infra red)? Describe _____

Have you ever been required to change jobs or locations due to work conditions or exposures? Describe _____

Have you ever had a hazardous substance exposure requiring treatment or time off work? If you have, please describe. _____

Have you ever had a work injury requiring time off work? If yes, please describe. _____

Family History:

Have any close family members (parents, siblings) had any illnesses? **YES NO**
(e.g., heart disease, high blood pressure, stroke, diabetes, cancer, alcoholism, other)

Relation	Living	Age	Present Health	Deceased	Age	Cause
Father	_____	_____	_____	_____	_____	_____
Mother	_____	_____	_____	_____	_____	_____
Brothers & Sisters	_____	_____	_____	_____	_____	_____
	_____	_____	_____	_____	_____	_____

Lifestyle:

Smoking: Do you smoke? **YES NO**

If YES how many per day? _____

If NO did you smoke in the past? **YES NO**

If YES when did you quit? _____ months / years ago.

Alcohol: Do you drink alcohol? **YES NO**

If YES, on average how many per week?

Beer (bottles) _____ Spirits (oz.) _____ Wine (oz.) _____

Exercise: Do you exercise on a regular basis? **YES NO**

If YES please complete the table below:

Activity	Intensity (Hard/Easy)	Exercise Time	Times per week

Has a physician ever suggested that you be restricted from physical activity? **YES NO**
If YES please explain.

Consent for independent medical examination and release of information:

The above information is correct and complete to the best of my knowledge.

I _____, hereby consent to a medical examination by
Dr. _____, who then has my consent to send a report of the findings
to **fire etc., Lakeland College** (Vermilion, AB). I further authorize any physician who has
attended or examined me to release full details of my medical status to the above named
physician upon their request.

Signature of applicant: _____

Date: _____

Witness: _____

Date: _____

**Medical Examination
For Physician Use Only**

Name _____ Date of Birth: ____ / ____ / ____

Height _____ in. _____ cm. Weight _____ lb. ____ kg.

Vision:

Far: uncorrected R 20 / ____ L 20 / ____ corrected R 20 / ____ L 20 / ____

Near: uncorrected R 20 / ____ L 20 / ____ corrected R 20 / ____ L 20 / ____

Colour: Normal _____ Impaired _____ Colour Test Used _____

Plates _____ Errors _____

Visual Fields (confrontation): Full _____ Impaired _____

Hearing:

R Normal _____ Impaired _____

L Normal _____ Impaired _____

Blood Pressure: ____ / ____ mmHg. **Pulse:** _____ bpm

	Normal	Abnormal	Not Examined	Findings	Follow-up Suggested
General Assessment					
E.N.T.					
Pulmonary					
Cardiovascular					
Abdomen					
Musculoskeletal					
Genitourinary					
Neurological					

Comments on physical examination:

Additional Tests (if indicated):

Laboratory:

- | | |
|--|---|
| <input type="checkbox"/> Kidney | <input type="checkbox"/> Liver Function |
| <input type="checkbox"/> CBC | <input type="checkbox"/> LIPIDS |
| <input type="checkbox"/> SMA ₁₂ | <input type="checkbox"/> HIV |
| <input type="checkbox"/> GGT | <input type="checkbox"/> ECG |
| <input type="checkbox"/> Glucose | <input type="checkbox"/> Audiogram |
| <input type="checkbox"/> Urine | <input type="checkbox"/> Toxicology |
| <input type="checkbox"/> Drug | <input type="checkbox"/> Other |

Imaging:

- | |
|-------------------------------------|
| <input type="checkbox"/> Chest Xray |
| <input type="checkbox"/> Ultrasound |
| <input type="checkbox"/> Other |

Function:

- | |
|--------------------------------|
| <input type="checkbox"/> PFT |
| <input type="checkbox"/> EST |
| <input type="checkbox"/> Other |

Other: _____

Comments on follow-up examination:

Examining Physician:

Name: _____ Date: _____

Signature: _____

Address: _____