First Responder

Wellness Program

Firefighter Fitness

Co-developed by the
Cambridge Health Alliance Victims of Violence Program
and the Cambridge Fire Department & Local Union 30
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FRWP Program Overview

The First Responder Wellness Program (FRWP) History

The FRWP provides supportive health and wellness information for first responders impacted by the events of September 11, 2001. The program was originally co-designed by Local 30 and the Cambridge Fire Department in conjunction with the Cambridge Health Alliance Victims of Violence (VOV) Program in 2003 to provide wellness services to First Responders and facilitate the implementation of the IAFF/IAFC Fire Service Joint Labor/Management Wellness/Fitness Initiative. The program has been expanded to offer health and wellness services to all Greater Boston first responders and uniformed personnel. The goals of the FRWP are to promote wellness, alleviate and prevent stress, and alleviate secondary traumatic stress.

About the Wellness Program Staff

First Responder Wellness Program services are provided by skilled staff with varying qualifications including masters level and licensed clinicians certified and experienced in Critical Incident Stress Management (CISM) who possess knowledge and experience working with first responders. First Responder Wellness staff work collaboratively with members of first responder communities to provide services unique to each Greater Boston first responders group (ie. Firefighters, police, EMT’s, CISM teams, and mental health providers.) Staff members are also trained and knowledgeable in areas of trauma, secondary trauma and bereavement.

Core Staff:

Lynda Bolduc-Hicks, LMHC, Psy.D., Program Coordinator, lbolduc-hicks@challiance.org

Meghan Gehan, LCSW, Assistant Coordinator and Coach, mgehan@challiance.org

Karine Toussaint, MA, Wellness Coach, k_toussaint@hotmail.com

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For additional information contact:
The First Responder Wellness Program Coordinator,
Dr. Lynda Bolduc-Hicks
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Presenter bios

Anita Chase, MS, ATC, CSCS

For the past three years Anita has been employed as an athletic trainer at Tufts University. She provides injury prevention, evaluation, and rehabilitation for athletes participating in several sports, including football, basketball, and track, and finds it to be an extremely rewarding career. Prior to joining the Tufts sports medicine team, Anita worked at a high school in CT as head athletic trainer and strength coach. While in graduate school, she was a personal trainer for Bally Total Fitness. Anita has a Bachelors degree in Biology and a Masters degree in Physical Education, with an Athletic Training concentration, and is nationally certified in athletic training, personal training, and strength and conditioning. Her passion for fitness resulted from her gymnastics background, and since retiring from the sport, she has become a recreational triathlete. She is very excited to be involved with the First Responder Wellness Program, and looks forward to working with the Revere fire department.

Contact information: anita.chase@tufts.edu, wk (617) 627-5102, or cell (401) 741-3516

Donna Nielsen

Donna has been actively involved in the fitness field for over 18 years with several national certifications such as ACE, NETA, MAD DOGG Athletics, AEA, Reebok, YMCA of The USA, and is a competitive member of Comprehensive Racing Team, LWAC, and USAT Triathlon team member. Donna lectures in Kinesiology, and teaches fitness classes at North Shore Community College at both Danvers’ and Lynn campus’. Donna also lectures on Health and Wellness, and Police officer stress at The Reading Police Academy, as well as administering fitness testing.

One of Donna’s pride & joys lies in her Boot Camp business, LYNN WOODS BOOT CAMP, which was featured in The Boston Globe, November 2006, “They sweat by dawn!” Her 5am class running and doing obstacle courses through the woods became so successful that she just added a new BEACH BOOT CAMP, in Nahant at 6:30pm. Donna offers a discount to both Police Officers and Firefighters that wish to enroll in Boot Camp.

Donna is also an avid trail runner and has competed in several mountain races, including Mt. Washington, Mt. Wachusett, Stonecat Trail marathon and the grueling Seven Sisters Trail race.

Contact information: www.trifitness.us, Donna@trifitness.us, or (978) 257-3891
ERGONOMICS AND THE FIRE FIGHTER

Ergonomics is the practice of making the work environment safer and more productive for the worker.

General workplace ergonomic risks - forceful exertions, awkward postures, localized contact stress, vibration, environmental conditions, and repetitive prolonged activity. The closer to the fire ground the higher the incidence of injury.

See table "Common fire fighting/EMS activities involving ergonomic hazards" on next page.

The leading numbers of Fire Fighter injuries (39.7%) are due to sprains, strains and muscular pain from overexertion or falls (1990-1994), the back being the greatest occurrence of injury.

Most job-related injuries that an ergonomic approach intends to minimize occur over time and are not of the acute type.

Keeping yourselves fit and strong while using an ergonomic approach as much as possible will help reduce the incidence and severity of strains and sprains. It is estimated that it is 34% cheaper to fund a department Fitness program than continue to pay for time lost, medical and staff replacement costs.

### Common Fire Fighting/EMS Activities Involving Ergonomic Hazards

**High-Rise Fires**
- Moving equipment and high-rise packs to the fire floor while wearing full turnout gear.
- Moving additional equipment (tools, extra air tanks, etc.) to staging area immediately below the fire floor.

**Ventilation and Overhaul Procedures**
- Breaking through a roof while on a ladder or a pitched roof.
- Using a pike pole to pull down a ceiling.

**Hose Laying Operations**
- Dragging a charged hose through a fire site, both inside (hallways/stairs) and outside (obstacles/icy conditions).
- Directing a hose for an extended period of time.
- Laying a hose to a fire site from a distant hydrant.

**Ladder Work**
- Rescuing a victim from a roof or window using a ladder.
- Raising ladders while under-manned.
- Using an axe while on a ladder.

**Forcible Entry**
- Entry through steel security doors using hand tools.
- Using hand tools and power equipment to open a wall.

**Extrications**
- Using hand and power tools in confirmed areas to extricate victims.
- Using heavy hydraulic equipment in auto extrication.
- Moving victims from a damaged car or collapsed building.
- Moving or salvaging furniture.

**Extended Procedures**
- Fighting fires for extended time period and conducting lengthy extrication procedures (automobile crashes, industrial fires, train derailment).

**Emergency Medical Operations**
- Carrying first response kits from ambulance or apparatus to accident scene.
- Moving victims from multistory buildings or homes using stairways.
- Moving patients onto and off stretchers/gurneys and loading stretchers/gurneys into ambulances.

Table from Fire and Emergency Medical Services Ergonomics, USFA 1996
Is Physical Activity Safe for Me?

Most healthy adults can increase their level of moderate physical activity without an extensive medical exam. Moderate activities are defined as brisk walking or other usual daily activity equal to brisk walking.

You may need to check with your doctor before beginning or changing your physical activity habits. To find out, circle yes or no for each question as it applies to you.

1) Has your doctor ever said you have heart or lung trouble and recommended only medically supervised activity?  
   YES  NO

2) Do you often have pain or pressure in your mid-chest, left neck, shoulder, or arm during or right after physical activity?  
   YES  NO

3) Have you developed chest pain over the last month?  
   YES  NO

4) Do you tend to lose consciousness or fall down due to dizziness?  
   YES  NO

5) Do you feel extremely breathless after mild exertion?  
   YES  NO

6) Has your doctor ever told you to take medication for your blood pressure or heart condition?  
   YES  NO

7) Has your doctor said you have a bone or joint problems that could be made worse by the proposed activity?  
   YES  NO

8) Is there a medical condition or physical reason, not listed here (e.g. diabetes), that might need special attention in an exercise program?  
   YES  NO

9) Are you middle-aged or older, physically inactive, and planning a fairly vigorous exercise program?  
   YES  NO

If you answered yes to any of these questions, talk to your doctor by phone or in person before increasing your physical activity. Tell him or her about the question to which you answered yes. Depending upon your needs, your doctor may recommend either unrestricted physical activity or a supervised activity program.
If you answered no to all the questions, you can be fairly sure that it is safe for you to start a moderate physical activity program that is slowly increased over time. If you feel any of the physical symptoms listed in questions 2, 3, 4, or 5, get medical help right away.

If you have a temporary minor illness, such as a cold, or if you have a fever, wait until you are better to being your activity.

**Safety Tips**

By following a few practical guidelines, you can ensure that your physical activity is always safe and fun!

- Most people can begin a moderate activity program with little supervision.
- Be sure to see a physician before beginning and intense or strenuous exercise program.
- If you are just starting to be active regularly, start slowly and gradually increase duration, intensity and frequency.
- Be active with a partner, when possible.
- Drink plenty of water before, during and after exercise.
- Stop exercising if you feel pain.
- Always follow instructions and safety recommendations when using exercise equipment or machinery.
- Wear proper clothing, including comfortable and appropriate shoes.
- Wear safety gear, including helmets and padding, when necessary.
- Obey traffic rules, or avoid traffic by using parks and trails.
- If you are outdoors at night, choose well-lit areas and wear reflective clothing.
- Avoid outdoor activities in extremely hot or cold weather.
- Wear sunscreen and sun-protective clothing when outdoors, and avoid the midday sun.
- If you experience lightheadedness chest pain excessive fatigue, nausea, or moderate to severe muscle or joint pain, stop exercising and consult a physician.
When you are injured:

- Seek immediate medical attention if you have a serious injury.

See your doctor if:

- You experience extreme or persistent pain.
- You have an injury that does not heal in a reasonable amount of time.
- You develop a fever or an infection.
- You have a joint injury that results in swelling.

If you have an injury that is not serious, follow the **RICE** principle:

- **R**est the injured area;
- **I**ce the area immediately to reduce swelling;
- **C**ompress the area with an elastic bandage or cloth to reduce swelling;
- **E**levate the injured area.

* Safety Tips offered by the American Cancer Society Active for Life Program.
HEALTH SCREENING FORM

Client # ____________________ Date: __________

Past Medical History

Have you ever, or do you now have any of the following:

<table>
<thead>
<tr>
<th>Condition</th>
<th>Condition</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asthma</td>
<td>High Blood Pressure</td>
<td>Chronic Fatigue</td>
</tr>
<tr>
<td>Anemia</td>
<td>Low Blood Pressure</td>
<td>Family History of CVD</td>
</tr>
<tr>
<td>Arthritis</td>
<td>Heart Attack (s)</td>
<td>Substance Abuse</td>
</tr>
<tr>
<td>Diabetes</td>
<td>Angina</td>
<td>Broken Bone (s)</td>
</tr>
<tr>
<td>Dizziness</td>
<td>Shortness Of Breath</td>
<td>Low Back Pain</td>
</tr>
<tr>
<td>Pregnancy</td>
<td>Emphysema</td>
<td>Eating Disorders</td>
</tr>
<tr>
<td>Cancer</td>
<td>Tuberculosis</td>
<td>High Cholesterol</td>
</tr>
<tr>
<td>Epilepsy</td>
<td>Mono</td>
<td>Amenorrhea</td>
</tr>
<tr>
<td>Hernia (s)</td>
<td>Allergies</td>
<td>Hepatitis</td>
</tr>
<tr>
<td>Fainting</td>
<td>Stroke</td>
<td>HIV</td>
</tr>
<tr>
<td>Bronchitis</td>
<td>Thyroid Problems</td>
<td>Heart Murmur</td>
</tr>
<tr>
<td>Arteriosclerosis</td>
<td>Atherosclerosis</td>
<td>Allergic to Medication</td>
</tr>
<tr>
<td>Chest Pain while exercising</td>
<td>Chest pain at rest</td>
<td></td>
</tr>
</tbody>
</table>

If you checked any of the above please specify:

__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________

Do you have any past or current medical problems not mentioned above that would prohibit you for participating in an exercise program?

__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________

Do you take any medications, vitamins or nutritional supplements? If yes, why?

__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________

Was there a specific cause or incident that motivated you to start exercising? (please explain)

__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
# CARDIAC RISK PROFILE

<table>
<thead>
<tr>
<th>NUMBER: ___________________</th>
<th>DATE: ________________</th>
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</table>

<table>
<thead>
<tr>
<th>AGE</th>
<th>10-20</th>
<th>21-30</th>
<th>31-40</th>
<th>41-50</th>
<th>51-60</th>
<th>60+</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HEREDITY</th>
<th>No known history of H.D.</th>
<th>1 relative w/ H.D. over 60</th>
<th>2 relatives w/ H.D. over 60</th>
<th>1 relative w/ H.D. under 60</th>
<th>2 relatives w/ H.D. under 60</th>
<th>3 relatives w/ H.D. under 60</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>8</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SMOKING</th>
<th>Non user</th>
<th>Cigar and/or Pipe</th>
<th>10 or less</th>
<th>20 a day</th>
<th>30 a day</th>
<th>40+ a day</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXERCISE</th>
<th>Intense work and recreational exertion</th>
<th>Mod. work + rec. exertion. Intense rec. exertion</th>
<th>Sedentary work and moderate recreational exertion</th>
<th>Sedentary work and light recreational exertion</th>
<th>Sedentary work and exercise</th>
<th>Complete lack of exertion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CHOLESTEROL</th>
<th>Below 180 mg</th>
<th>181-205 mg</th>
<th>206-230 mg Or Don’t know</th>
<th>231-255 mg</th>
<th>256-280 mg</th>
<th>281-300 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BLOOD PRESSURE</th>
<th>100 systolic</th>
<th>120 systolic</th>
<th>140 Systolic</th>
<th>160 Systolic</th>
<th>180 Systolic</th>
<th>200 + Systolic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GENDER</th>
<th>Female</th>
<th>Female 45+</th>
<th>Male</th>
<th>Bald Male</th>
<th>Bald Short Male</th>
<th>Bald Short Stocky Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STRESS</th>
<th>No real work or personal pressure</th>
<th>Rare work or personal pressure</th>
<th>Moderate work or personal pressure</th>
<th>Use pills or drink for stress</th>
<th>Always need pills or drink for stress</th>
<th>Can’t seem to cope. Seeing an M.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DIABETES</th>
<th>Low blood sugar</th>
<th>Normal or don’t know</th>
<th>High sugar controlled by diet</th>
<th>High sugar controlled by tablets</th>
<th>Diabetic on Insulin w/ no complications</th>
<th>Diabetic with complications</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

**TOTAL: ____________**

- 8 – 15..... Risk well below average
- 16 – 32..... Risk below average
- 24 – 32..... Risk generally average
- 33 – 41..... Risk moderate
- 42 – 50..... Risk at a dangerous level
- 51 – 74..... Danger Urgent!! Reduce risk

10
First Responder Wellness Program
Fitness / Wellness Consultation Form

Please complete the following information to the best of your ability with the personal trainer meeting with you.

By signing below you acknowledge that there are certain risks involved in participating in an exercise program, and waive the right to hold the facility or the trainer liable.

Code number: ______________________

1) I have read and completed the “Is Physical Activity Safe for me” form and acknowledge that if I answered yes to any of the questions on that form it is my responsibility to contact my physician before beginning any physical activity with this Wellness Program.

2) Please give a short summary of your exercise history (type of exercise, frequency, intensity and any changes in activity level)

________________________________________________________________________

________________________________________________________________________

3) List one goal you wish to work towards during your participation in the First Responder Wellness Fitness Program.

________________________________________________________________________

4) How will you measure your goal?

________________________________________________________________________

5) How will you know that you achieved your goal?

________________________________________________________________________

Print Name: __________________________

Signature: ____________________________ Date: ________________

Trainers Signature: ______________________ Date: ________________
# STRENGTH PROGRAM FOR THE FIRE FIGHTER

<table>
<thead>
<tr>
<th>Exercise</th>
<th>Major Muscle Used</th>
<th>Fire ground Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lat Pull down</td>
<td>Latissimus Dorsi</td>
<td>Pulling ceilings or hose</td>
</tr>
<tr>
<td>Incline Bench Press</td>
<td>Pectorals</td>
<td>Raising equipment, ladders, crawling</td>
</tr>
<tr>
<td>Military Press</td>
<td>Deltoids</td>
<td>Raising ladders</td>
</tr>
<tr>
<td>Shrugs</td>
<td>Trapezius</td>
<td>Wearing air tank</td>
</tr>
<tr>
<td>Biceps curls</td>
<td>Biceps</td>
<td>Tool usage</td>
</tr>
<tr>
<td>Tricep Extensions</td>
<td>Triceps</td>
<td>Opening walls, roofs</td>
</tr>
<tr>
<td>Leg extension</td>
<td>Quadriceps</td>
<td>Climbing ladders, stairs</td>
</tr>
<tr>
<td>Leg curls</td>
<td>Hamstrings</td>
<td>Climbing down from stair, ladders</td>
</tr>
<tr>
<td>Forearm curls</td>
<td>Flexors and extenders</td>
<td>Grip strength on tools</td>
</tr>
<tr>
<td>Sit ups</td>
<td>Abdominus rectus</td>
<td>Everything</td>
</tr>
</tbody>
</table>

## Lat Pull Down

---

## Incline Bench Press

---
Tricep Extensions

Lunges

Forearm Curls
Sit-Ups

Photos courtesy of Jeremy Collins ~ www.rhoderunner.org ~ 617-201-7719

ALTERNATIVE EQUIPMENT AND EXERCISES
(CORE TRAINING)

**Wobble board**

**Circle Pads**

**FIT Ball**
Can be used in core stability with most standard exercises.

**Dyna Bands**
Increase joint ROM, increase stretching of a joint or muscle, increase strength of muscles at non-traditional or hard angles.
Resources

There are many resources online and in print that you can use to help you set goals for fitness, keep track of your exercise regimen, or help motivate you. The following are a small selection of resources you might find useful:

The American Council on Exercise  
www.acefitness.org

The National Strength and Conditioning Association  
www.nsca-lift.org

Health & Fitness @ Firehouse.com  
http://cms.firehouse.com/content/section/content.jsp?sectionId=11

The IAFC info on the Wellness/Fitness Initiative  
www.iafc.org/displaycommon.cfm?an=1&subarticlenbr=382

Health & Safety – IAFF.org  
www.iaff.org/safe/content/wellness/index.htm

Downloadable resources at Strengthcats.com  
www.strengthcats.com/firepower.htm

US Fire Administration – Firefighter Fitness-Wellness  
www.usfa.dhs.gov/research/safety/fitness.shtm

Jeremy Collins - Firefighter and ACE Certified Peer Firefighter Trainer for the City of Cambridge.  
www.rhoderunner.org or (617) 201-7719

Acknowledgements

The FRWP would like to thank Colin Walsh, Director, and Stephen J. Boyle Jr., Coordinator, from the Cambridge Fire Department F.I.T. Program for their assistance in co-creating this workshop. For more information on the CFD F.I.T. Program, you can contact FF Walsh at cwalsh@cambridgefire.org, 617-497-0520, or Lt. Boyle at sboyle@cambridgefire.org, 617-354-9188.