Chapter 6
Medical Fitness, Rehab and Performance Standards
Need for Fitness

• Approximately 800,000 volunteer firefighters and 300,000 career firefighters.
• To endure demand firefighters must be in excellent physical condition.
Need for Fitness

- Cardiovascular issues 40-50% of firefighter deaths annually.
  - CDC says firefighters suffer highest mortality rates due to cardiovascular events on the job.
  - Studies showed that recruits under 35, 43% were overweight and 33% obese.
Need for Fitness

- Departments have an obligation to provide for personnel safety and health.
- Health and safety does not get the same quality and quantity of effort and resources.
  - Physical fitness is a requirement of business.
Need for Fitness

• Needs of community should dictate caliber of employee.
• Employee must also take personal responsibility for physical and mental condition.
• It is important for all firefighters to be able to meet a fitness standard and pass a medical exam at any point in their career.
Current Recommended Standards

- **NFPA 1500**
  - Addresses many aspects of firefighters safety including medical and fitness.
  - References NFPA 1581 on who can conduct physical exams.
  - States the fire department shall develop physical performance requirements for candidates.
Current Recommended Standards

• NFPA 1500
  – Also addresses incumbent members and states physical requirements that are objective and measureable.
FIGURE 6.3 Performance of the 13 essential job tasks of NFPA 1582 requires firefighters to be medically fit. 

Courtesy of Captain Terry L. Secrest
Current Recommended Standards

- NFPA 1582
  - Details specifics about aspects of medical exams.
  - Also identified 13 essential job tasks and descriptions.
Current Recommended Standards

• NFPA 1583
  – Addresses fitness requirements described in NFPA 1500
Current Recommended Standards

• NFPA 1584
  – Integral part of maintaining health and safety of fit medically qualified firefighters.
Where to Start

• Leadership
  – Most critical component of health and safety program is leadership that drives it.
FIGURE 6.4 Every fire department must have a policy and procedure in place for evaluating vital signs on the emergency scene or during training activities.

_Courtesy of Travis Ford, Nashville Fire Department_
Where to Start

• Developing Policy
  – Commit to decisions by putting them into policy
  – Programs need solid direction
Where to Start

• Several organizations have worked to reduce firefighters LODD’s
  – IAFF Wellness Fitness Initiative
  – National Volunteer Fire Council
What Threatens Firefighters?

• 2008 over 40% of all LODDs were cardiovascular in nature.
  – Remains number one killer of firefighters annually
  – Fire service has to do everything possible to prevent these deaths.
FIGURE 6.5 There are several intrinsic and extrinsic risk factors that affect cardiovascular related issues. Courtesy of Wayne Haley
What Threatens Firefighters?

• Risk factors
  – Intrinsic
    • Genetic predisposition
  – Extrinsic
    • Firefighting environment and impact on human body
    • What firefighters do to themselves
      – Smoking
      – Unhealthy eating
What Threatens Firefighters?

• Other risk factors
  – Smoking
  – Alcohol
  – Drug Use
  – Diabetes
  – Cancer
FIGURE 6.10 Cross-fit training is becoming a popular workout routine.  
*Courtesy of Martin Grube*
Fitness

- Fitness standards
- Fitness coordinators
- Fitness training and equipment
- Performance standards
Test Development Basics

• Justification
  – Critical element is collecting data
  – Specific tasks need to be validated
    • Survey 60-75% of membership on tasks they consider essential to the job
    • Or use IAFF template
FIGURE 6.12 Physical ability standards help in the initial screening process of entry-level candidates. 

*Courtesy of Travis Ford, Nashville Fire Department*
FIGURE 6.12 (continued) Physical ability standards help in the initial screening process of entry-level candidates.  
*Courtesy of Travis Ford, Nashville Fire Department*
Current Accepted Performance Standards

- Part of the IAFF/IAFC Joint Labor Management Initiative
  - Used for entry-level applicants
  - Used by more than 900 departments
  - Only internationally recognized test created by both labor and management and overseen by the Department of Justice
FIGURE 6.15 Taking vital signs on the emergency scene is an important part of being properly rehabbed.

*Courtesy of Martin Grube*
Rehab Standards

• Comprehensive emergency rehabilitation program
  – Critical to monitor your fire crews
  – Establishing rehab can save lives
  – Key element is individuals who can monitor and record vitals
    • NFPA 1584 does not mandate vital sign measurement
  – Responsibility rest with safety officer or incident commander.
FIGURE 6.9 Healthy cooking at the station plays an important role in a firefighter’s overall health and wellness. 
_Courtesy of Travis Ford, Nashville Fire Department_
Implementation

• Making the commitment
  – Current programs provide a great platform for what will work.
  – IAFF/OAFC have brought fitness issues to the spotlight.
  – Fire service needs all governing agencies to make a commitment to safety.
Implementation

• Making the commitment
  – Know the expectations and consequences before hand and be provided adequate training and rehabilitation to meet minimum standard.
  – Every fire department in this country should be adopting the fitness and medical criteria defined by NFPA 1500, 1582, 1594.
Implementation

• Setting up for success
  – Support for program must be earned
  – Success depends on buy-in from all members of department
  – May be difficult to accomplish
  – Timelines critical
Chapter 6 Summary

• Health and safety of firefighters must be solved at local level.
• Everyone in the fire and emergency services should strive to develop and implement a total health and wellness program.
Chapter 6 Summary

- The expectation to perform is ever present in the fire service.
- A health and fitness program should be an administration priority.
Chapter 6 Summary

- NFPA 1500, 1582, 1583 and 1584 standards pertain specifically to health, safety, and fitness.
- Medical and fitness requirements are an important part of NFPA 1500.
- Thirteen essential job tasks and descriptions are identified in NFPA 1582.
Chapter 6 Summary

• Fitness assessment, fitness standard, and physical abilities are key in NFPA 1583.
• Providing rehabilitation on the emergency scene or during training is part of NFPA 1584.
Chapter 6 Summary

• Several organizations have already developed health and wellness programs.
• Intrinsic and extrinsic risk factors play an important role in coronary heart disease.
• Candidate physical ability test is used to test entry-level applicants.
Case Study

• THE SCENE:
The chief presented a proposal to their Board of Directors for money to be used for physical fitness equipment. The proposal stipulated that the members of the fire department would be required to take an annual physical fitness assessment.
Case Study

• THE SCENE:
  The Board of Directors granted them the money, and the Chief proceeded to hold the assessment. The assessment included a breathing test, height and weight assessment, a 12 lead EKG testing and riding a stationary bike.
Case Study

• THE SCENE:

One of the members of the fire department passed right through all of the tests, until he got to the stationary bike. He complained of shortness of breath and asked if he could stop. Upon further investigation of his condition, he was found to have an elevated heart rate. He was then taken to the hospital and found to have a blocked artery.
Things to Consider

1. It is imperative that departments have annual physical assessment programs to identify potential health related issues.

2. Programs should be expanded to implement preventative measures as well.
Things to Consider

3. Health and safety issues of firefighters must be solved at the local level.
4. Health and fitness programs is one of the greatest gifts an administration can give to its department.

Other considerations?