



[FIREFIGHTER
HEALTH and SAFETY
Research Summit

September 16, 2010



Steven T. Edwards, Director

Maryland Fire and Rescue Institute



Firehouse.com - Printable Article
The Web's Source for Fire, Rescue & EMS

[Click Here to Print This Page](#)

Fire Instructors Taunted Recruits in Memphis 'Hell Night'

Fire recruit James Coleman remains in critical condition from October drill

SHERRI DRAKE
Courtesy of The Commercial
Appeal

Firefighter recruit James Coleman picked up his legs with his hands in order to keep walking, as other fatigued recruits dropped.

Instructors mocked the weary recruits over a loudspeaker, riding next to them on a golf cart, urging them to give up and ring a bell to signal defeat.

A quitter -- according to some instructors -- was worse than being a dead man on Hell Night.

Coleman, 41, wouldn't quit and it landed him in a coma.

"They'd have to drag me off of there dead before I rang that bell," one instructor yelled at a wavering recruit. "I'd be dead or unconscious before I rang that bell."

Six Memphis fire training officials -- three lieutenants, one driver, and chiefs David Rutledge and Frank Cotton -- were transferred out of the division after an investigation into the Oct. 12 session.

Seven recruits were taken to hospitals that night.

After several requests for results of that investigation, city officials released a summary Nov. 19 saying -- in



Memphis City Atty. Sara Hall
An instructor hectors a recruit.



Memphis City Atty. Sara Hall
If any recruit drops the hose, the entire group must start the drill over.



WORKPLACE SOLUTIONS

From the National Institute for Occupational Safety and Health

Preventing Deaths and Injuries to Fire Fighters during Live-Fire Training in Acquired Structures

Summary

Fire fighters are subjected to many hazards when participating in live-fire training. Training facilities with approved burn buildings should be used for live-fire training whenever possible. However, when acquired structures are used for live-fire training, NIOSH strongly recommends that fire departments follow the national consensus guidelines in NFPA 1403, standard on live-fire training evolutions [NFPA 2002a] to reduce the risk of injury and death. These guidelines are summarized in this document.

Description of Exposure

Live-fire training exercises are a crucial element in the structural fire fighting curriculum. Live-fire training is often conducted in burn buildings designed and approved for such training. Unlike burn buildings, acquired structures are obtained from a private property owner and are not designed or intended for live-fire applications. Several factors associated with live-fire training in acquired structures create safety concerns for fire departments: insufficient or unstable structural components (i.e. floors, railings, stairs, chimneys, and ceilings), limited access to entry and exit paths, hidden combustible materials, debris, and inadequate ventilation [NFPA 2002a].

During 1983-2002, 10 fire fighters died as a result of injuries while participating in live-fire training exercises at acquired structures [Fahy 2003]. During 2000-2002, the NIOSH Fire Fighter Fatality Investigation and Prevention Program investigated three incidents involving four fire fighters who sustained fatal traumatic injuries while participating in live-fire training in acquired structures [NIOSH 2000, 2001, 2002]. Two of these cases are described below.

Case Studies

Case 1

A volunteer fire fighter (the victim) died and two other fire fighters were injured during a live-fire training exercise in a two-story duplex. The victim and another

DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention
National Institute for Occupational Safety and Health

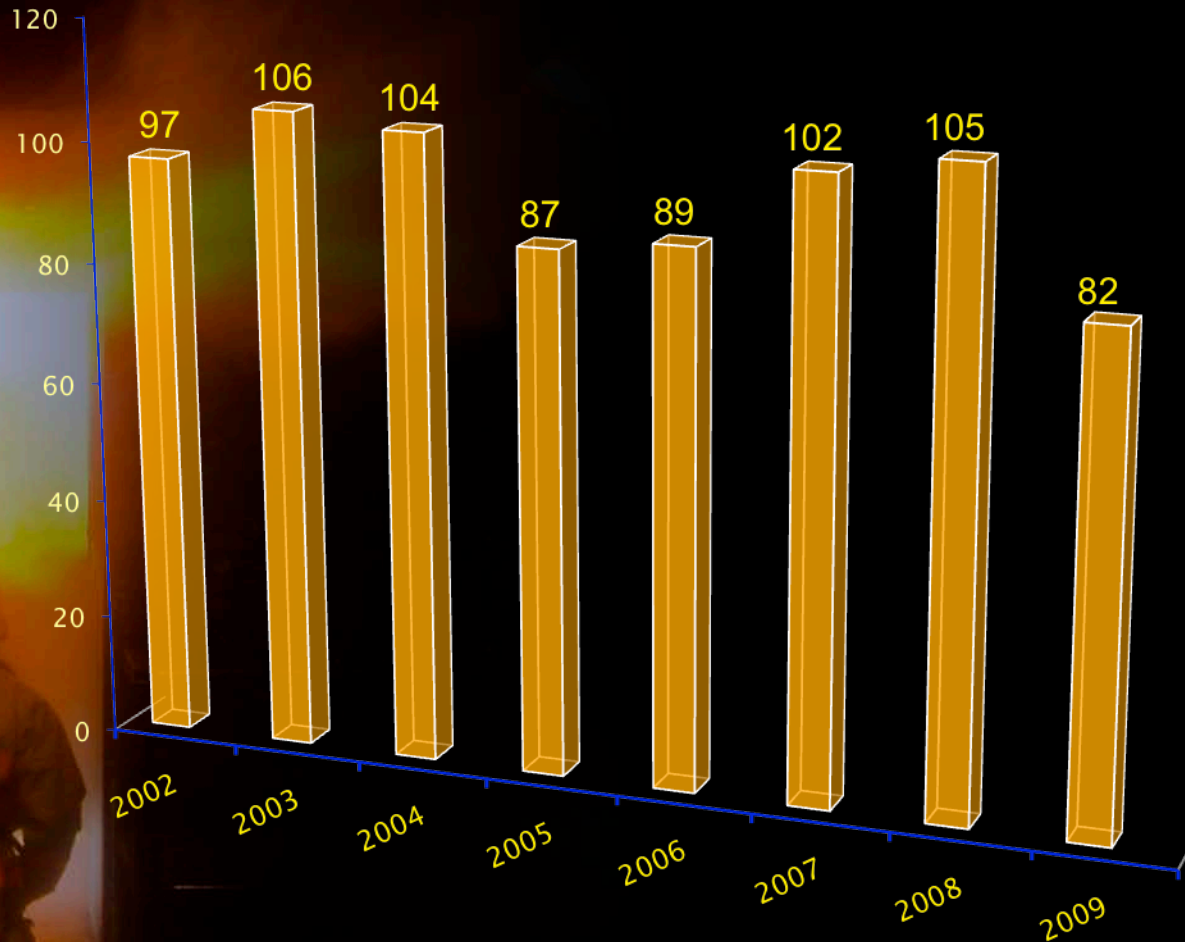


Physical Demands of Firefighting

- ❖ Cardiac Failure
- ❖ Thermal Stress
- ❖ Inhalation of Contaminants
- ❖ Disorientation and Panic

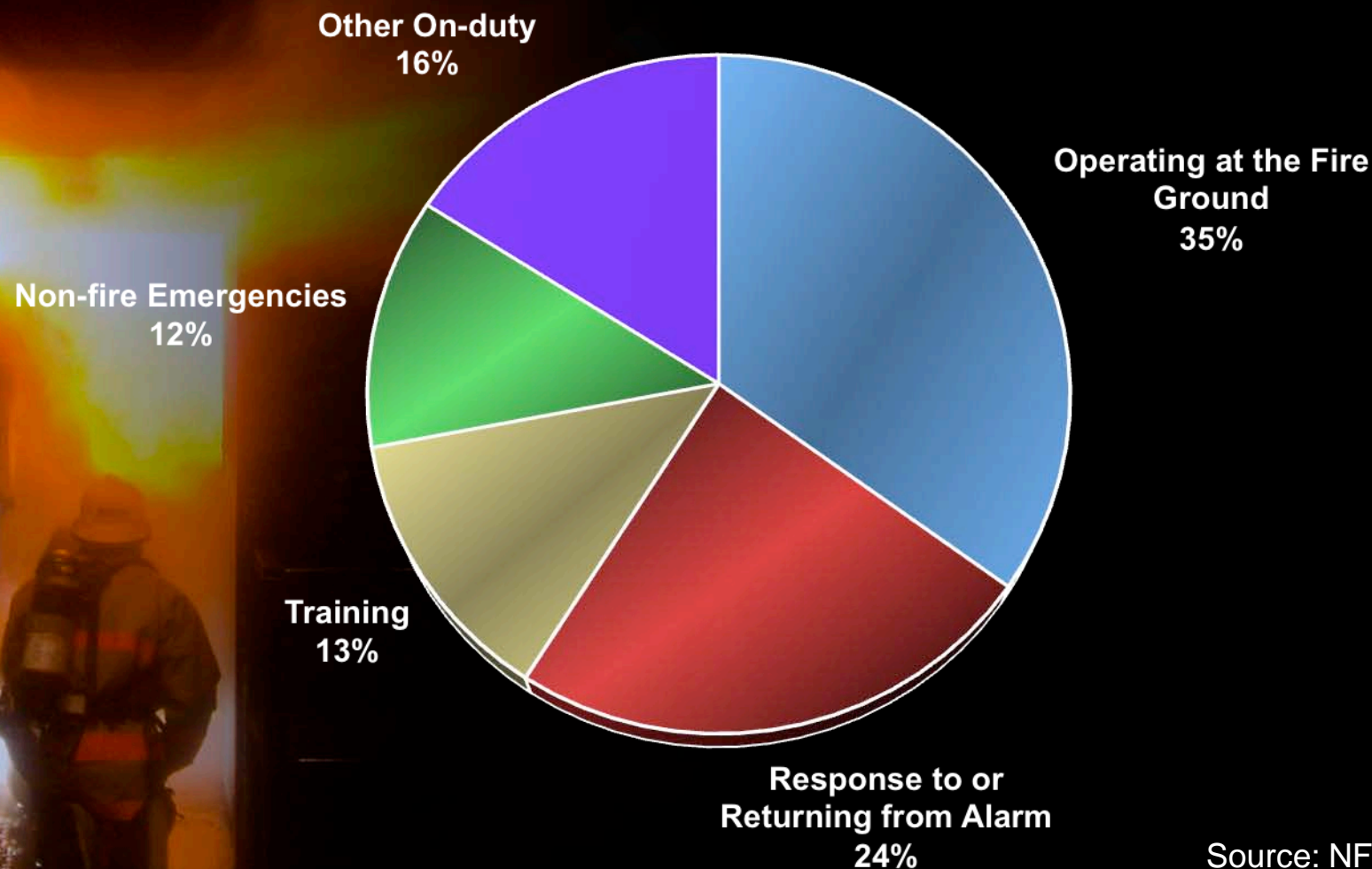


Firefighter Fatalities



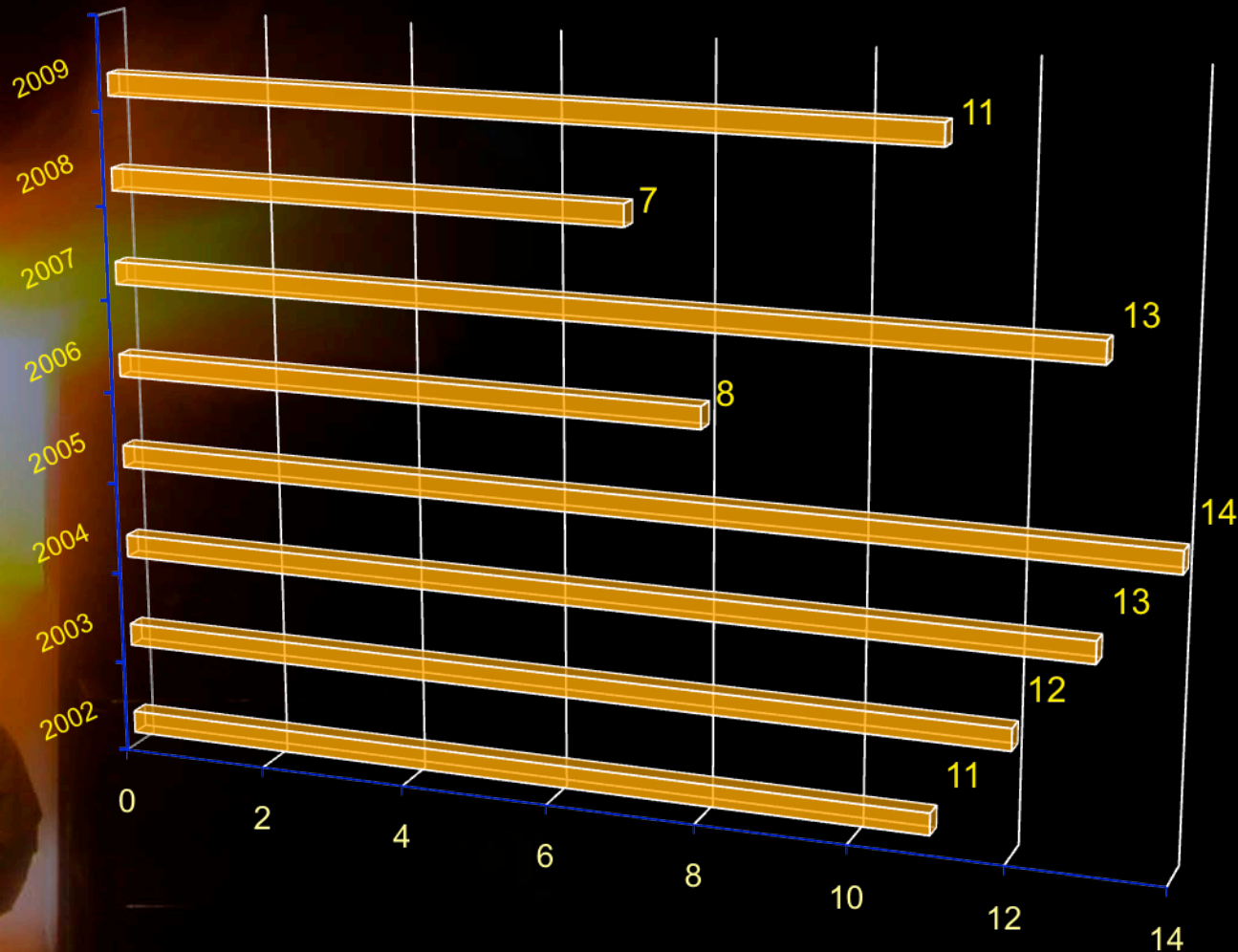
Source: NFPA 2010

2009 Firefighter Fatalities by Type of Duty



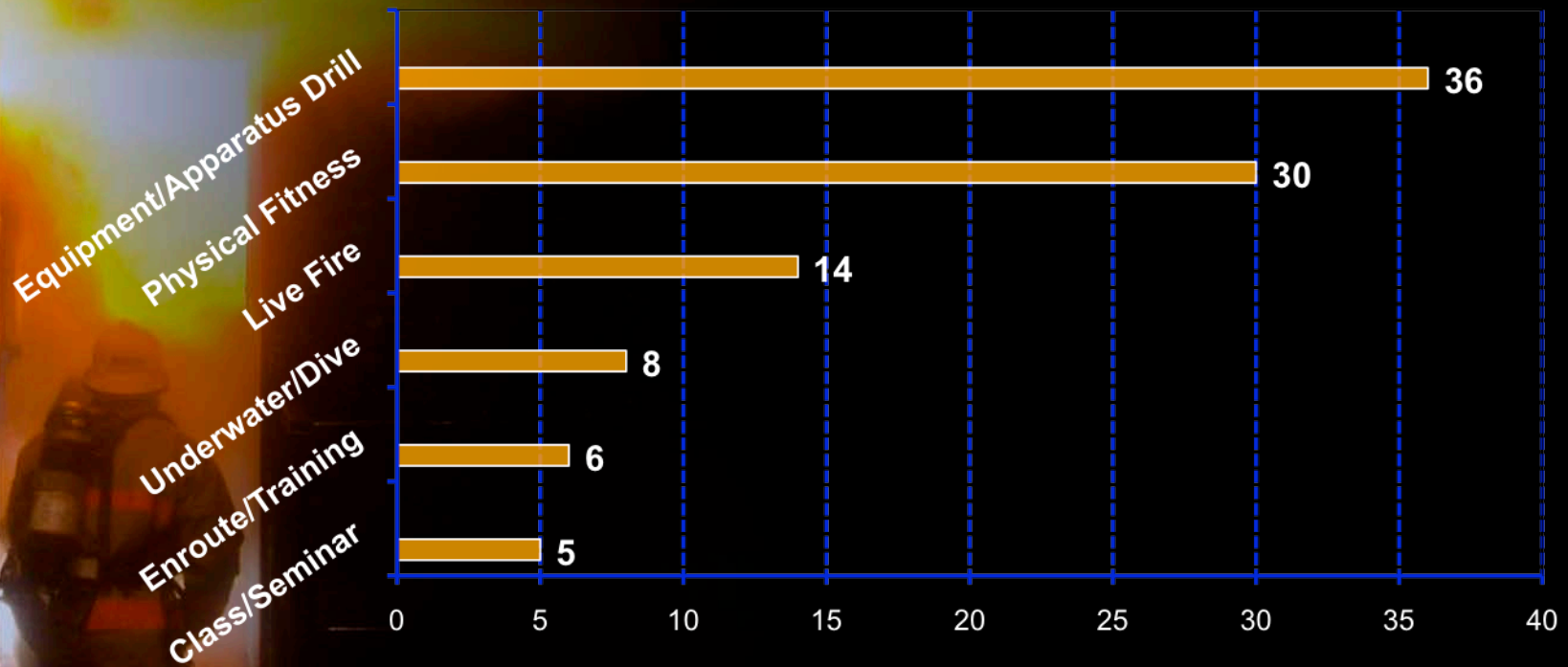
Source: NFPA 2010

Fire Training Fatalities



Source: NFPA 2010

Leading Types of Training Activities Associated with Fatalities 1996 - 2005

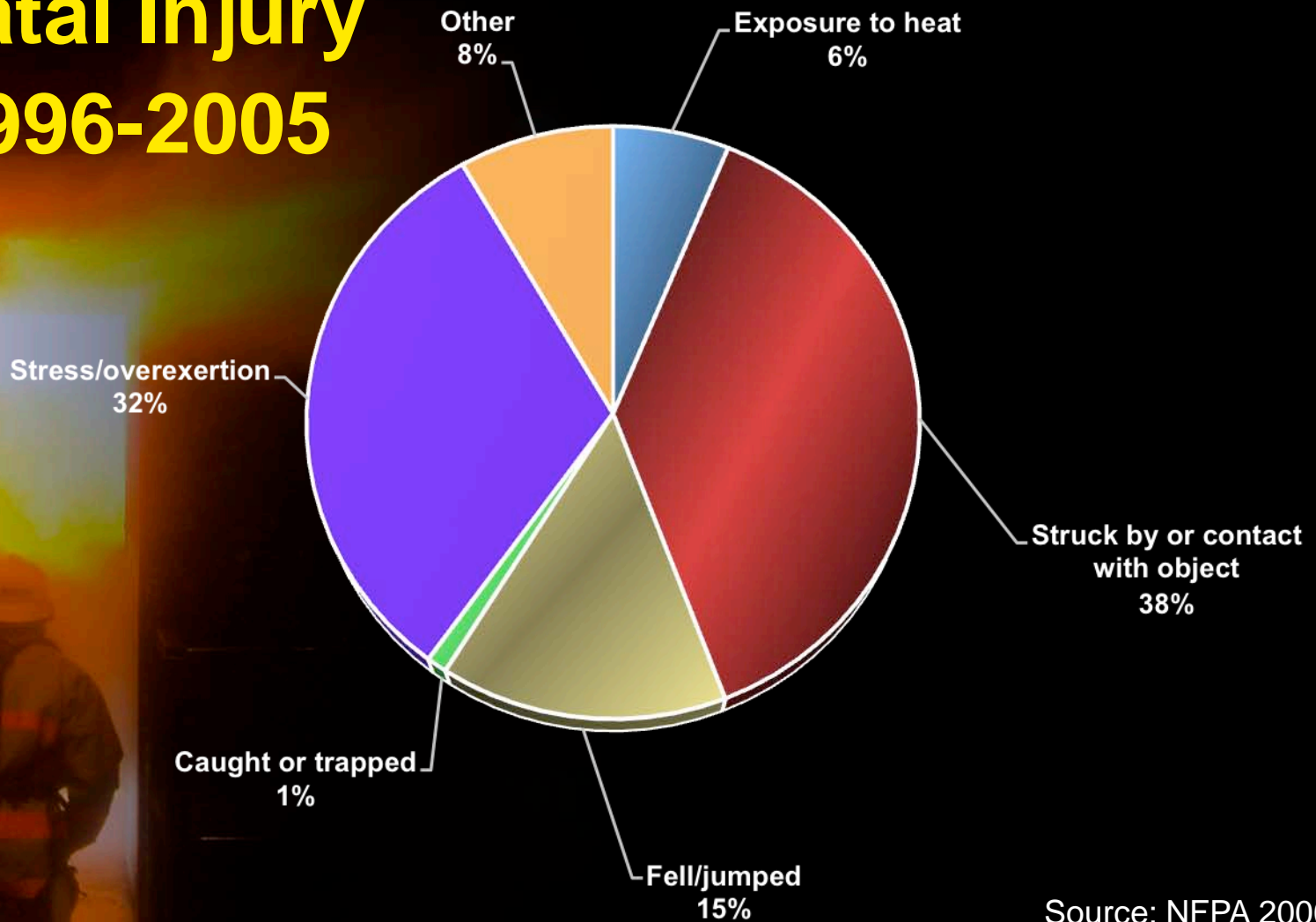


2008 Training Injuries

CATEGORY	BURNS	SMOKE INHALATION	OTHER RESPIRATORY	BURNS & SMOKE INHALATION	WOUND, CUT, BLEEDING, BRUISE
N	320	95	135	10	1,285
%	3.9	1.2	1.7	0.1	15.8

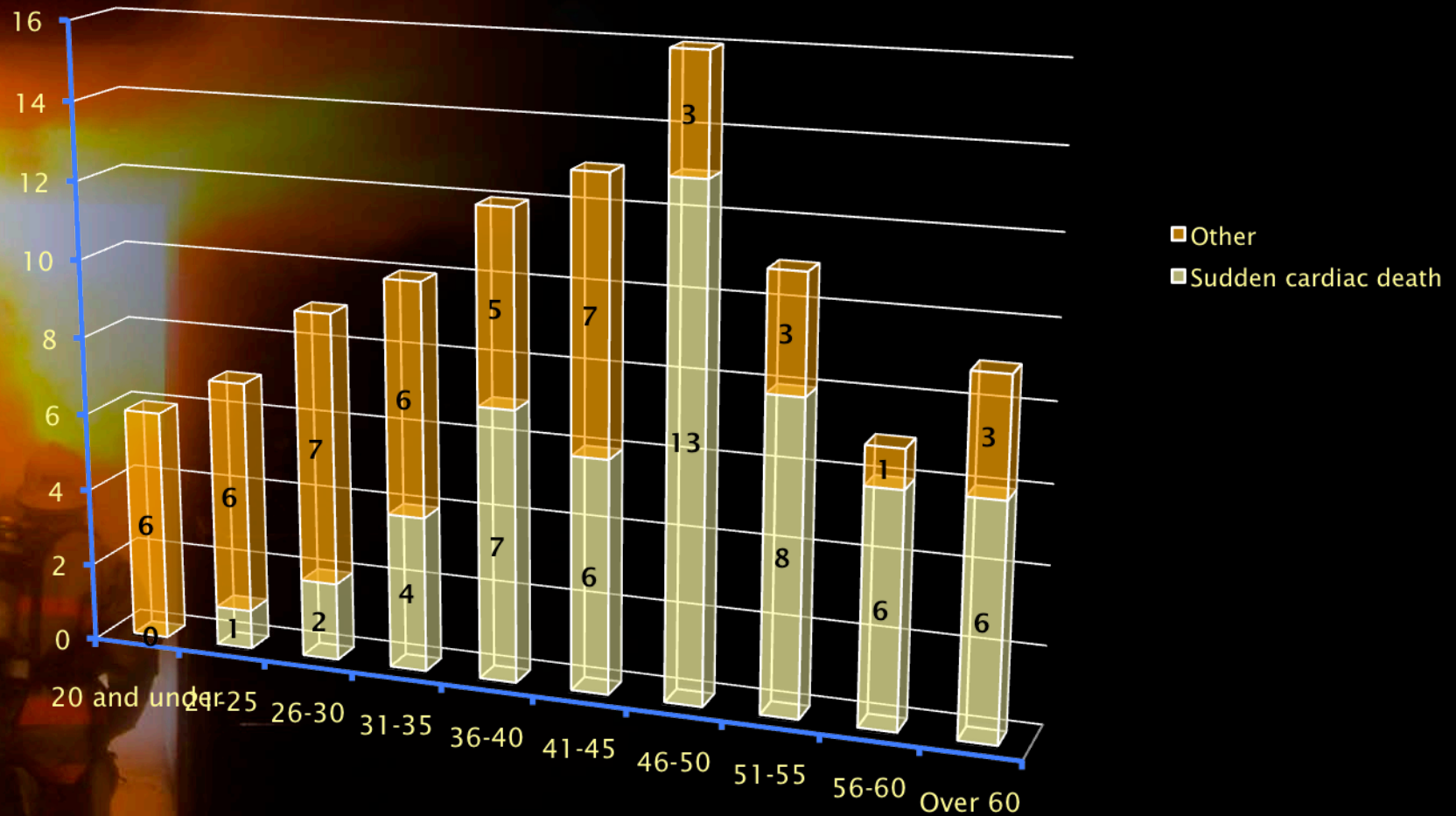
CATEGORY	THERMAL STRESS	STRAIN, SPRAIN	HEART ATTACK OR STROKE	DISLOCATION, FRACTURE	OTHER	TOTAL
N	315	4,710	110	215	950	8,145
%	3.9	57.8	1.4	2.6	11.7	100

Firefighter Training Cause of Fatal Injury 1996-2005



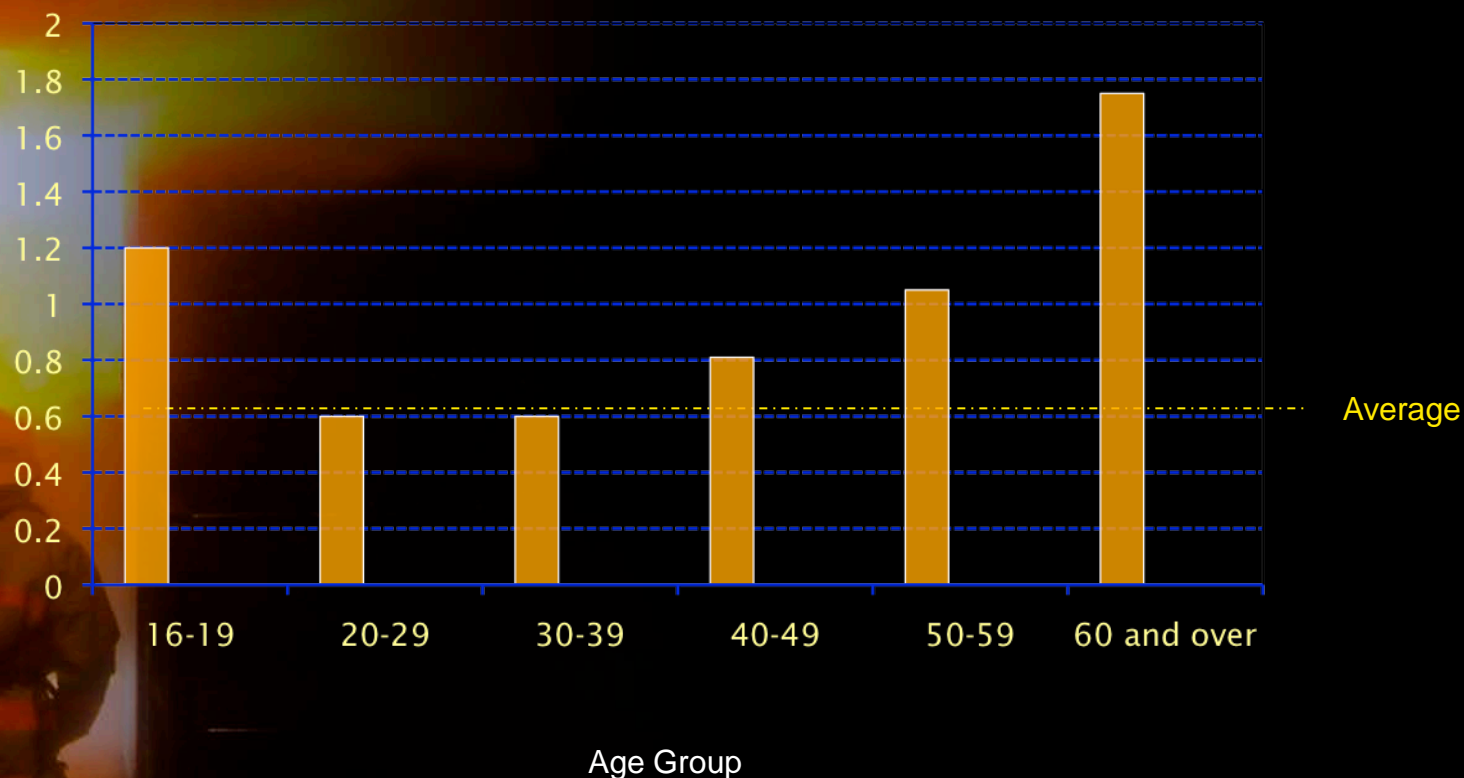
Source: NFPA 2006

Firefighter Training Deaths by Age and Cause of Death - 1996-2005



Firefighter Training Death Rates for Training - Related Fatalities

per 100,000 Career and Volunteer Firefighters 1996-2005



Firefighter Health Status

The NFPA reports that over the past 25 years, post mortem information on the deceased firefighter's medical histories have been available for 713 of the 1,177 sudden cardiac death victims.

Of those 713 victims, 603 (or 84.6 percent) had suffered prior heart attacks, severe arteriosclerotic heart disease, undergone bypass surgery or angioplasty / stent placement, or were diabetic.



Heart Healthy Firefighter Program

At fire service trade shows around the country, the program has screened over 5,000 firefighters, both career and volunteer, for blood pressure, cholesterol, and body fat.

RESULTS:

2,000 firefighters tested for body fat distribution / blood pressure

Considered to the obese (>25%)	44.7%
Had stage 2 hypertension	6.8%
Had stage 1 hypertension	31.5%
Were pre-hypertensive	46.4%
Had normal blood pressure	15.2%

5,411 firefighter tested for cholesterol

High or borderline high	38.4%
-------------------------	-------

Cardiac Death by Occupation

	% of On-Duty Deaths
❖ Firefighter	45%
❖ Police	22%
❖ Overall*	15%
❖ Construction	11.5%
❖ EMS	11%

*Average % of all occupational fatalities for all industries



[FIREFIGHTER
HEALTH and SAFETY
Research Summit

September 16, 2010