

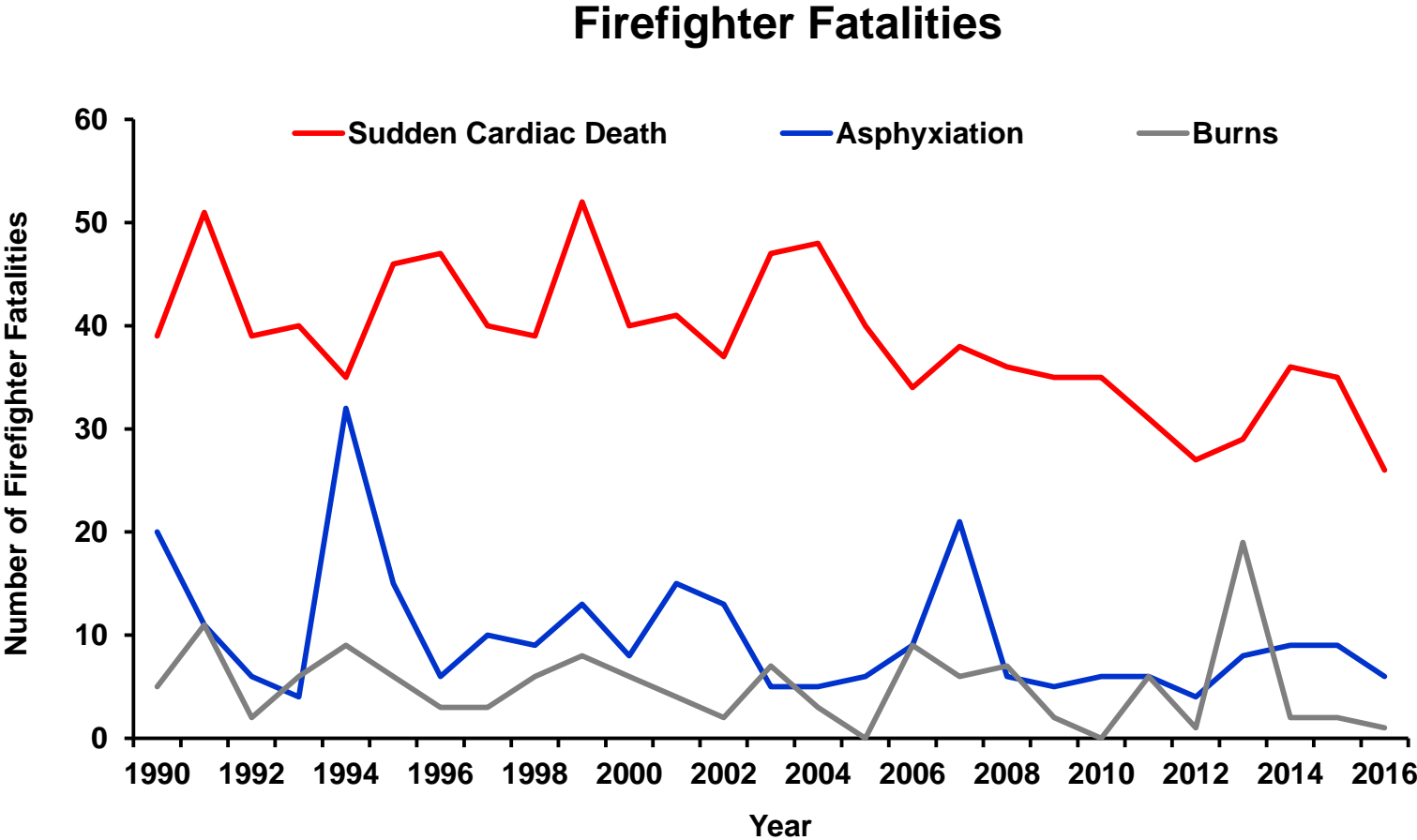
EKG Monitoring for Detection of Arrhythmias and Ischemia



FIREFIGHTER PHYSIOLOGICAL MONITORING
TECHNOLOGY
SUMMIT
March 28-30, 2018
Washington, DC



Firefighter Fatality Statistics



Fahy et al., NFPA, 2016

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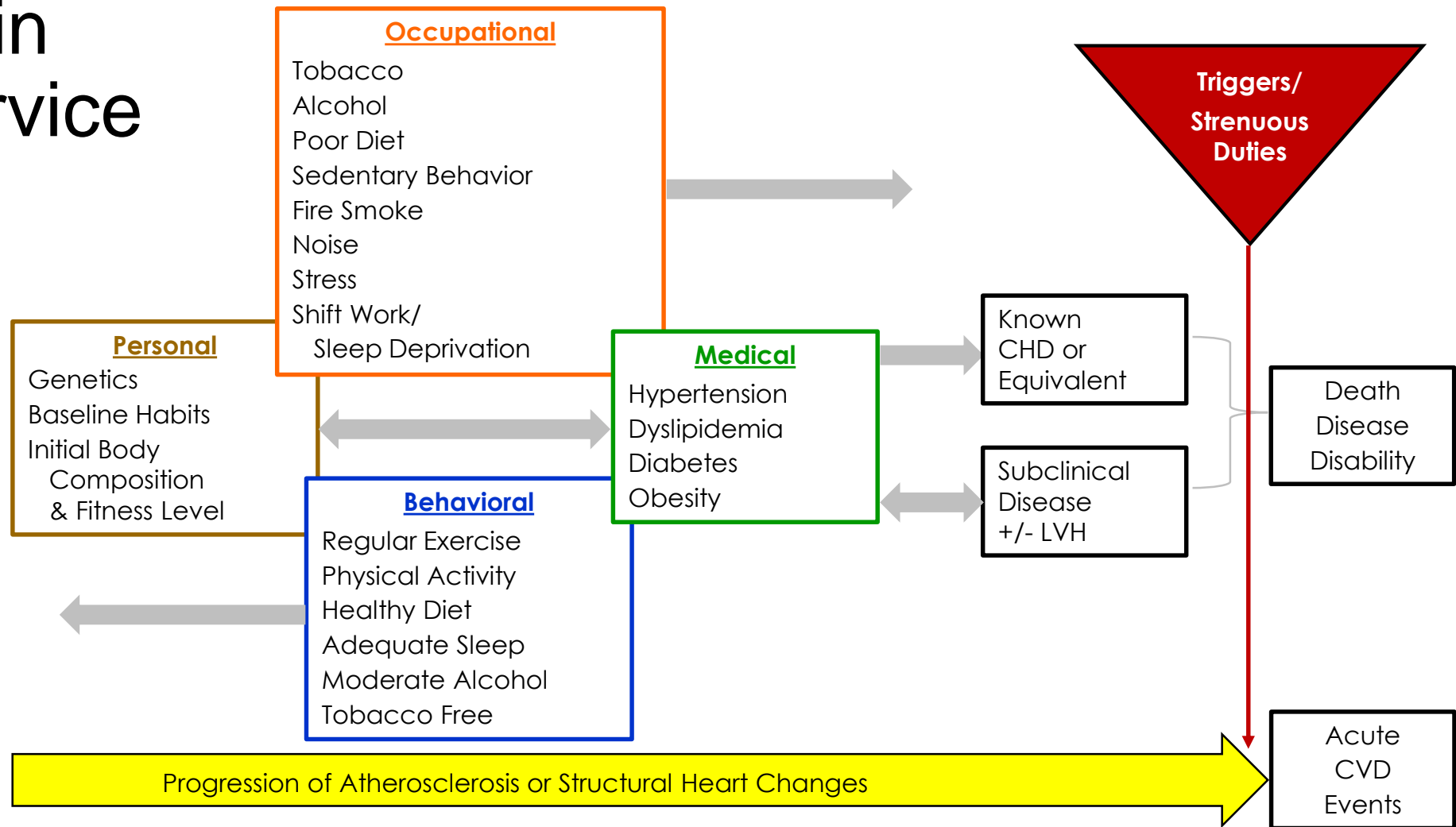
Kales et al. 2007

**Line of Duty Deaths - CHD related
N=449, 1994-2004**

	Time Spent (%)	Fatalities (%)	Odds Ratio
Fire Suppression	1	32	136
Response to Alarm	4	13	14.1
Return from Alarm	7	17	10.5
Physical Training	8	13	6.6
Nonfire emergencies	15	9	2.6
Nonemergency duties	65	15	1.0

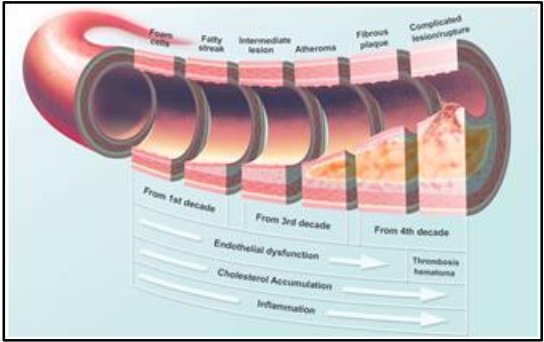
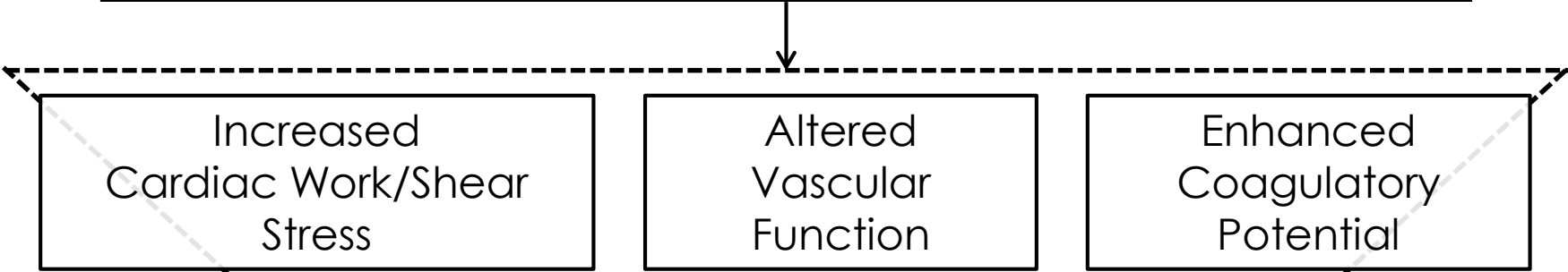


CV Events in the Fire Service



Adapted from Soteriades et al., *Cardiol Rev*, 2011

Cardiovascular Strain of Firefighting

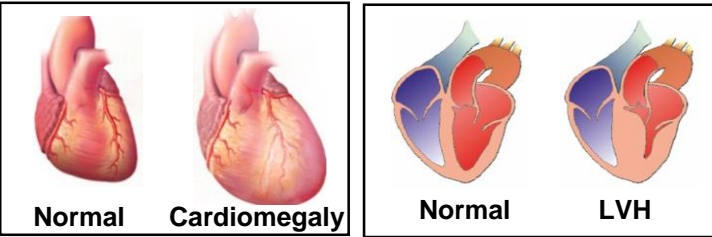


Underlying CHD

Cardiomegaly/LVH, and/or Underlying CHD

Plaque Rupture and Thrombus Formation

Arrhythmia



SCD or Other CVD Event

 **Extreme Physiology & Medicine**
Smith et al., 2013