

Firefighter Fitness: Improving Performance and Preventing Injuries and Fatalities

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Abstract

Firefighting is dangerous work. Each year, approximately 80,000 firefighters are injured and about 100 firefighters lose their lives in the line of duty. Firefighters face multiple dangers in the course of their work; they encounter toxic fumes, dangerous products of combustion, high radiant heat loads, and a chaotic work environment. Despite the myriad dangers, the leading cause of line-of-duty death among firefighters is sudden cardiac event, accounting for approximately 45% of duty deaths. Firefighting requires high levels of aerobic fitness, anaerobic capacity, and muscular strength and endurance; however, data suggest that many firefighters do not possess high aerobic or anaerobic capacity. Furthermore, many firefighters are overweight and have one or more modifiable risk factors for cardiovascular disease. The safety of the public and the health and safety of firefighters would be enhanced if firefighters followed well-designed fitness programs to improve overall health and fitness.